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AN EMPIRICAL ANALYSIS OF THE IMPACTS OF ABENOMICS ON THE JAPANESE ECONOMY AND CO_2 EMISSIONS – AN ASSESSMENT BASED ON THE E3MG MACRO-ECONOMETRIC MODEL

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Abstract

In this paper we provide a model-based assessment of Abenomics, a package of policies that is designed to stimulate the Japanese economy after a 20 year slump. We estimate the impacts on the economy (GDP etc.) and the environment (CO_2 emissions) of Abenomics and its component parts using a macro-econometric model. We apply the E3MG model (Energy-Environment-Economy Model at the Global level) developed by the Cambridge Econometrics and the University of Cambridge.

We then shift focus to one particular aspect of Abenomics: an increase in the consumption tax to support public finances in the longer term. This has proved to be controversial in the past and has been cited as one of the main reasons for previous electoral defeats in Japan. We instead consider the possibility for raising revenues through a carbon tax, to see if this could be implemented at lower economic cost.

We estimate the economic costs and benefits of the three 'arrows' of Abenomics based on existing information. We then turn to how the long-term deficit in Japan could be financed. Although there are limitations to the modelling, the results show that the policies in place could kick-start the economy into self-sustaining growth. However, the proposed increase in the consumption tax (VAT) is easily large enough to end the recovery if implemented too soon. We compare the effects of the VAT increase with an equivalent carbon tax and find that not only does the carbon tax reduce emissions close to the level in Japan's Copenhagen pledge, it is also less harmful to the Japanese economy.

KEY WORDS : Abenomics, E3MG Model, Carbon Tax and Revenue Recycle

1. Introduction

Shinzo Abe became Prime Minister of Japan for the second time at the end of December 2012. Shortly after coming into office he announced a radical plan of economic reform that aimed to end Japan's "lost decade" of stagnation and deflation. This plan was quickly dubbed "Abenomics" in the national and global media.

There are three parts to Abenomics, which have been called the three "arrows" after a speech by Prime Minister Abe on the 26th of December 2012 in which he introduced Japan's path to recovery. The three arrows are:

(i) A strong monetary stimulus, including Quantitative Easing (QE)

(ii) Fiscal stimulus, supported by long-term restructuring

(iii) Economic structural reform, including implementation of the Trans-Pacific Partnership trade (TPP) deal

These are described in more detail in Section 2. In this paper we estimate impact on the economy(GDP etc.) and the environment(CO_2 emission) of Abenomics and its component parts using a macro-econometric model. The E3MG model (Energy-Environment-Economy Model at the Global level) that we use is described in more detail in Section 3 and the methodological approach in terms of scenarios is described in Section 4. The results from these scenarios are presented in Section 5.

We then shift focus to one particular aspect of Abenomics: an increase in the consumption tax to support public finances in the longer term. This has proved to be controversial in the past and has been cited as the reason for previous electoral defeats in Japan[1]. We instead consider the possibility for raising revenues through a carbon tax, to see if this could be implemented at lower economic cost, using a similar approach to recent work carried out in Europe (Pollitt et al, 2012) and the US (Carbone et al, 2013). The results from this are given in Section 6. Our conclusions from the exercise are given in Section 7.

2. Background and landscape of Abenomics[2]

2.1 Background of Abenomics

The Japanese economy has been among the worst performers in the OECD since the collapse of the bubble economy in the early 1990's. In this period real GDP growth was not more than 0.8% pa and nominal GDP growth was -0.2%. Interest rates have been close to zero for much of this time. More recently, the financial crisis and the subsequent recession affected Japan as other developed nations also reduced their interest rates to zero, causing a relative appreciation in the yen and harming Japanese export competitiveness.

The combination of economic stagnation and deflation has become self-reinforcing, because low growth prospects mean businesses have little reason to invest in new capacity or carry out research activities. External positive factors, including the rapid development of the Chinese economy and the ICT revolution have not resulted in growth in the Japanese economy. Over this period the Japanese government has introduced several policy measures (such as increase of public investment or promotion of bad loan clean-up) to try to stimulate demand. The Bank of Japan also has kept an easy-money policy and a zero interest-rate policy. While these have in some cases been effective, they have not led to self-sustaining growth, although this is in part due to external factors. They have also led to Japan having the highest debt-to-GDP ratio in the developed world.

[1] http://www.reuters.com/article/2013/07/28/us-japan-economy-tax-idUSBRE96R02A20130728
[2] This chapter is based on Cabinet office (2013a) and (2013b).

Finally, the East Japan Great Earthquake hit the Tohoku region in 2011, causing critical damage to one of its nuclear power plants. This situation, which is still yet to be resolved, revealed several structural weaknesses in the Japanese economy, including stretched supply chains and mismanagement of the energy sector, as well as vulnerability to natural disaster.

In summary, the Japanese economy has been in a long period of stagnation and deflation, with little obvious prospect of recovery.

In order to address long-term stagnation, the Abe Cabinet floated the 'Three arrow strategy' (which became known as Abenomics) in February 2013[3]. Abenomics consists of 'bold monetary policy', 'agile fiscal policy', and a 'growth strategy to arouse private investment' based on the plan for 'Ten years of renaissance reproduction'.

2.2 The 'Three arrow strategy' of Abenomics

(1) The first arrow: Bold monetary policy

In January 2013 the Japanese government and Bank of Japan (BOJ) announced in a joint statement that they would strengthen policy coordination on quantitative and qualitative credit expansion for sustainable growth with stabilized general prices. As a part of this policy coordination, BOJ made a statement that it would adopt, for the first time, an inflation target of 2% and that it would regard this rate as "stable price increase".

In addition, BOJ also decided in the first Monetary Policy Meeting with the new governor and vice governor that it would realize this target as soon as possible and that it would double the monetary base in two years as one of the measures of "quantitative and qualitative monetary expansion". Moreover, BOJ announced that it would at least double both its holdings of government bonds and the average remaining period of these bonds in two years. As a result, on April 26, the Japanese government announced that the consumer price index (which excludes perishable foods and the effect of VAT changes) would rise by 0.7% in FY 2013, by 1.4% in FY 2014, and by 1.9% in FY 2015[4].

[3] http://www.kantei.go.jp/foreign/96_abe/statement/201302/22speech_e.html
[4] To put this into historical context, consumer price changes were -0.3% in 2011, 0.0% in 2012, 0.4% in 2013, 1.6% March in 2014 and 3.4% April in 2014. The large increase in rate April in 2014 is thought to be largely

After 20 years of failing to change expectations of deflation in Japan, it is hoped that this ‘regime change’ in Japanese monetary policy will lead to self-fulfilling expectations of future inflation. This will in turn allow negative real interest rates, prompting business investment and consumers to bring forward large investments. Japan would thus escape from its current liquidity trap.

(2) The second arrow: Agile fiscal policy

In January 2013, the Abe cabinet agreed for FY 2012 a supplementary budget of 13.1 trillion yen, dubbed the “Emergency economic package for rebirth of Japanese economy” and due to come into effect with the normal budget in FY 2013. This supplementary budget, the second largest following the emergency budget after the recent financial crisis, includes central public spending of 10.3 trillion yen (about 2% of GDP) and a subsidy to the National Pension System of 2.8 trillion yen as seen in Table 1.

In May 15, the Diet passed FY 2013 normal budget bill that prioritizes re-activation of the economy and stability of people’s lives. So far, each project initiated based on the FY 2012 supplementary budget has run smoothly and has brought positive effects to the recovery of the Japanese economy. The Japanese government has mobilized all the policy measures including public finance, tax system, and relaxation of regulations with a special focus on such fields as (i) revival from the disaster and prevention of disasters, (ii) creation of wealth by economic growth, and (iii) stabilization of people’s lives and development of regional economies.

In addition, the Japanese government will announce further policy measures before the VAT rate rises from 5% to 8% in April, 2014. These measures are scheduled to be implemented, based on the supplementary budget of FY 2013 combined with the normal budged in FY 2014, as a so-called 15 month budget. They include (i) abolition of the special increase in corporation tax imposed for reconstruction of quake-hit areas (900 billion yen), (ii) reduced taxes for new investment (500 billion yen), (iii) tax credits for homebuyers (400 billion yen), (iv) cash subsidies to lower income groups (300 billion yen), and (v) investment in public works for the Tokyo Olympic games (one trillion yen).

Despite this, the effective corporation tax rate in Japan is still high by international standards, even though the effective rate will fall from the present 38.0% to 35.6% in FY 2014 (by abolition of the special increase imposed for reconstruction of quake-hit areas). The government is considering a further reduction of the corporation tax rate after FY 2015.

(3) The third arrow: Innovation strategy to arouse private investments

The Abe cabinet focuses on the following three issues:

(i) Drawing out private investment through the market and improving labour productivity through investment, cultivation and proper utilisation of human resources, and promotion of innovation.

(ii) Creating new demands by finding business solutions in advance of the rest of the world.

(iii) Embracing globalization and maintaining a business environment where labour, goods, and capital can move freely.

attributable to the increase of in the consumption tax rate from 5% to 8% on the 1st of April (by Statistics of Japan)

Table 1. Emergency economic package for rebirth of Japanese economy (trillions yen)

Contents	Fiscal Expenditure of government	Total Amount of project
1.Revival from the disaster and prevention of disasters	**3.8**	**5.5**
-Revival from the disaster (The East Japan Great Earthquake)	1.6	1.7
-Prevention of disasters (earth quake, typhoon, etc.)	2.2	3.8
2.Creation of wealth by economic growth	**3.1**	**12.3**
-Promotion of private investments	1.8	3.2
-Support SMEs and the primary industries	0.9	8.5
-Support SMEs to deploy overseas production bases	0.1	0.3
-Promotion of employment and skill development	0.3	0.3
3.Stabilization of people's life and activation of regional economies	**3.1**	**2.1**
-Stabilization of people's life	0.8	0.9
-Activation of regional economies	0.9	1.2
-Enhancement of local financing	1.4	
Others	**0.3**	**0.3**
Total	**10.3**	**20.2**
Subsidy to the national pension system	2.8	
Total (including subsidy to the national pension system)	**13.1**	

Source: Cabinet office (2013)

The Abe cabinet has set a target for private investment in equipment (63 trillion yen as of FY 2012) to increase by 10% in three years, to recover the level before the financial crisis (70 trillion yen/year). There is a target for the number of unemployed (for six months or more) to decrease by 20% in five years, an increase in the job turnover ratio of general workers except part-timers (7.4% as of 2011), and an increase in the labor participation rate of females aged 25-44 (68% as of 2012) to 73%.

The Abe cabinet also aims to lead the world innovation ranking within five years and to develop a world-class information disclosure system (with at least 10,000 data sets) as part of becoming a top class ICT society. There is a target for Japan to rank third or higher (from a current position of 15th) in the World Bank's business environment ranking and for Tokyo to increase from fourth to third in the Mori memorial foundation's global power city index. Other targets include increasing the business establishment and closure ratios from 8% to 10%, increasing the number of SMEs from 0.7m to 1.4m and, in the next five years, getting 10,000 SMEs to deploy overseas production bases in order to enhance business competitiveness and innovation.

While the first two arrows focus on short-term recovery, the third arrow focuses on structural change and aims to provide the foundations for long-term growth. The integration of the three arrows is a unique factor and makes Abenomics different from traditional growth strategies. It is hoped that this will lead to a new period of economic expansion in Japan.

2.3 Previous analysis of Abenomics

Table 2 presents the main financial and economic indicators over a two-year period. The figures show that there have been some quite major impacts on the Japanese economy. GDP growth, although positive at first, has since slowed dramatically due to the increase in the consumption tax and at the time of writing Japan is in technical recession.

Table 2. The main financial and economic indicators over a two-year period after Abenomics

Indicators	November 14, 2012	November 17, 2014
Nikkei Stock Average	8664 yen	16,973 yen
Total Market Value of Tokyo Stock Exchange	254 trillion yen	494 trillion yen
Yen/US dollar	79.90 yen	115.94 yen
Long term interest rate	0.75%	0.48%
Monetary Base in Bank of Japan	124 trillion yen	255 trillion yen
Consumer Price Index (comparing to same month of last year)	-0.1%	3.0%
Increasing rate of real wage(comparing to same month of last year)	-0.2% (September 2012)	-3.0% (September 2014)
GDP increasing rate (comparing to same term of last year)	0.1%(2012Q4) 2.4%(2013Q3)	-1.6% (2014Q3)

Source: Statistics Japan (access November 18 2014) Statistics in web page of Statistics Japan

These figures do not, however, compare what might have happened to the Japanese economy if Abenomics had not been implemented. Several research organizations have attempted to estimate the impacts of Abenomics, either using a modelling approach or more qualitative methods.

The most notable quantitative assessment is from CRIEPI (2013), who used a macro-econometric model to estimate that Abenomics led to GDP being 2.4% higher in 2013 and 2% higher in 2014. This was primarily the result of the fiscal stimulus and currency devaluation that led to higher exports. Other more qualitative studies found that Abenomics had some positive influence but still had to overcome significant obstacles (including fiscal consolidation) (Mizuho Research Institute, 2014) and that the policies had not done enough to restore business confidence (Suzuki, 2014).

The Cabinet Secretariat (2013) carried out an assessment of the TPP using the GTAP Computable General Equilibrium model and found that it would lead to higher exports, lower imports and higher GDP (0.66%). However, there would be a fall in agricultural production.

3. The E3MG model

There are no macroeconomic models that are capable of fully addressing the issues related to the Japanese economy and the possible solutions. Ultimately it will be a return of the ‘animal spirits’ described by Keynes (Keynes, 1936) that will lead higher investment and household consumption to return the economy to self-sustaining growth and inflation; this lies beyond the scope of existing models and in the realm of behavioral economics. In this paper, however, we assess the measures that have been proposed based on the current economic situation as an indication of the potential impacts. In the conclusions section we discuss whether this would be sufficient to kick-start longer-term, self-sustaining growth.

We apply the E3MG model developed by the Cambridge Econometrics and the University of Cambridge. E3MG has been applied extensively for analysis in Europe and at global level (Barker et al, 2005; 2006; 2008; 2012; Barker and Scrieciu, 2009) and more recently for assessment in Japan as well (Lee et al, 2012, and Pollitt et al, 2014)[5].

[5] The model is described in detail at the webpage www.e3mgmodel.com .

E3MG is a macro-econometric model based on the system of national accounts, as defined by the System of National Accounts (European Commission et al, 2009), with further linkages to energy demand and environmental emissions. The labor market is also covered in detail. In total there are 33 sets of econometrically estimated equations, also including the components of GDP (consumption, investment, and international trade), prices, energy demand and materials demand. Each equation set is disaggregated by country and by sector.

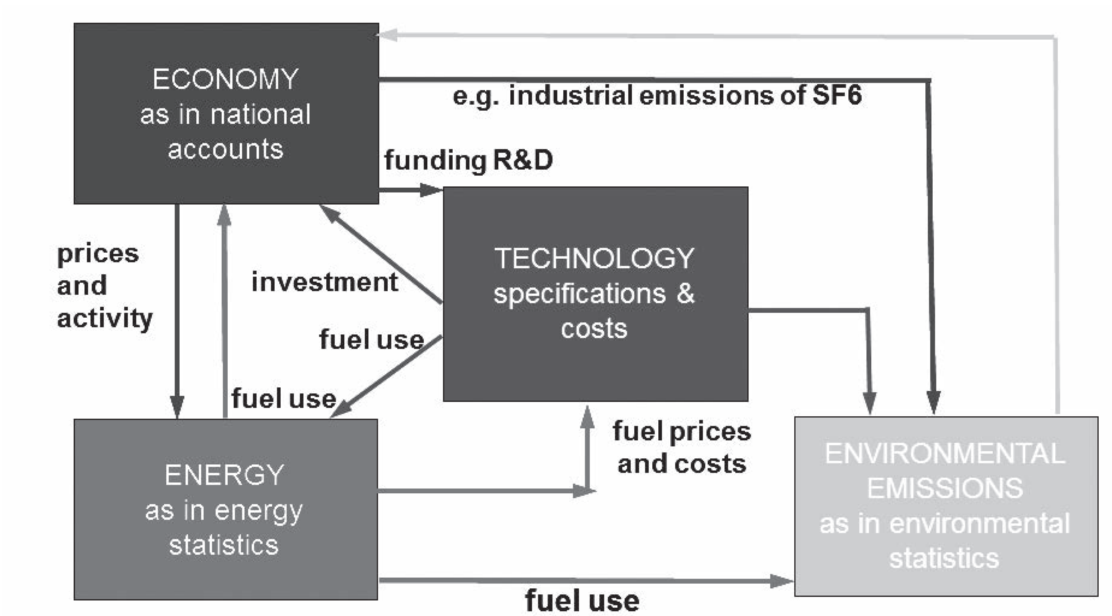
It is similar to CGE models in terms of coverage (the whole economy, broken down into sectors) but has important theoretical differences in approach. In general, CGE analyses assume full price adjustment and equilibrium in all markets, including the labor market. That is, there will be no (involuntary) unemployment. Therefore, the results tend to be determined by the supply-side conditions such as resource availability and labor supply. In other words, the demand-side effect of policy change on consumption or private investment will not have positive effects on economic performance or employment.

However, as described above, the Japanese economy is still in a long-term slump. It is clear that the economy is not operating at optimal capacity, hence the introduction of Abenomics. Therefore, despite some shortcomings (notably the lack of a financial sector), E3MG is a one of the most appropriate tools available to analyze this impact is a macro-econometric model based on the theory of effective demand.

The scenarios feature a range of variables which are adjusted including long term interest rate, consumption, exchange rate, investment, trade prices, VAT, social security rates, pension's benefits and a carbon tax. To analyze all of these factors requires a modelling system capable of interlinking these variables in a detailed manner not just within Japan but through interactions with the rest of the world. For instance a global model can incorporate the impact upon Japan's economy due to competitive changes in international environment in which firms operate.

Another key advantage of E3MG is the tight integration of the economy with energy markets (see Figure 1). The economy module provides measures of economic activity and general price levels to the energy module; the energy module then determines levels and prices of energy consumption, which is passed to the emissions module and is also fed back to the economic module. This makes the model a suitable tool for assessing the effects of environmental taxes, as well as consumption taxes, as we describe in Section 6.

Figure 1: E3MG as an E3 Model



Source: authors' compilation.

4. Scenarios

The interpretation of the policies and definitions as model inputs is very important. Some of the policies lie outside the scope of the E3MG model and so we must provide a set of suitable assumptions in place.

The baseline used for the analysis is a broad continuation of existing trends. It includes inputs from OECD reports and the projections of energy consumption and CO_2 emissions come from World Energy Outlook (IEA, 2012). In 2012 GDP for Japan was 5.96 trillion USD, whilst employment stood at 62.4 million people, and inflation at -0.03 %. The outputs from the E3MG model are scaled to be consistent with these projections.

In our basic assessment of Abenomics we have set up two groups of scenarios. The first group follows the three arrows and includes one scenario for each arrow. As the E3MG model does not include a full representation of the money supply or financial system, the first arrow is represented by:

(i) A reduction in the long run interest rate to zero

(ii) A fall in the value of the yen from the average rate in 2013 by 9% over 2 years (2014 - 2015)

(iii) An estimation of the wealth effect from stock market gains attributed to Abenomics

In our analysis we assume that the main effect of Quantitative Easing has been to inflate financial asset values. The stock market gains that have occurred over and above those which would have occurred anyway (measured against other world indices) are taken in percentage terms and used as a proxy for increase in financial wealth. Previous research by OECD, shows that this does not translate into a large immediate increase in spending so we take 2% of Abe-premium and increase household expenditure by this amount. A 2% marginal propensity to consume is very similar to the value of 2.2% recently found by the Japanese Ministry of Finance (2014).

The fiscal package in the second arrow is perhaps the most straight-forward to model. The fiscal stimulus is entered to the model as an increase in government expenditure. The following measures are taken into account in the scenario:

(i) 10.3 trillion yen in government expenditure split across four years (2013-2016)

(ii) 1 trillion yen in Olympic expenditure split across seven years (2013 -2020)

On the 7th of September 2013 Tokyo, Japan won the race to host the 2020 Olympics. This has been trumpeted as the '4th arrow' by the media as it will inevitably lead to an increase in spending on construction and general public infrastructure[6]. It has been estimated that 1 trillion yen will be spent over the 7 year period in the run up to the games.

It should be noted that we did not include the subsidy to the national pension system as this is not part of the Abenomics package. In 2009 legislation was passed to increase the government's obligatory contribution for basic pensions from 36.5% to 50%. It was later established in November 2012 that revenue raised from consumption tax should provide a permanent funding mechanism. The special pension fund was financed by issues of deficit-financing bonds. However, the tax revenue which will be received from the increase in consumption tax which occurred on 1st April 2014 will become the new source of funds for the special pension fund. This is a temporary measure created to finance the gap between the targeted contribution rate and the initial rate until the consumption tax increase occurs.

Although the third arrow has many targets, as of yet very little concrete policy is in place. The modelling of this arrow is therefore quite limited and we focus on the Trans-Pacific Partnership (TPP) trade deal. In it we assume a removal of 92%[7] of tariffs on all trade between TPP regions, using average tariff information from the Ministry of Economy, Trade and Industry of Japan[8]. We have made one exception for agriculture and food products where the removal of tariff is three quarters as there is still no concrete agreement on the tariff levels. This is to reflect the sensitivity around the issue of food commodity import tariffs in Japan. For the modelling we assume that the trade deal comes into place from 2013 onwards, although a later date would be more realistic.

The three arrows are modelled as separate scenarios and are referred to as Scenario 1, 2 and 3 respectively. Scenario 4 is a combination of the three arrows and therefore represents the final impacts of Abenomics in our analysis.

We then turn to the issue of how the Japanese government raise its finances in the long run. In Scenario 5 we will assess the potential cost to the Japanese economy of raising VAT rates to cover the long-term fiscal deficit. The scenario assumes an increase in the VAT rate from 5% to 8% in April 2014 and then again to 10% in October 2015. This timeline is subject to change as the government is fearful of derailing the economy.[9] The revenues from the tax are used to reduce Japan's national debt and to finance the government's increased obligatory contribution to basic pensions.

[6] Sankei News 8th of September, 2013

[7] Nikkei (Nihon Keizai Shimbun) (4th of Oct.2013).

[8] http://www.meti.go.jp/committee/summary/0004532/2011_02_04.pdf

[9] The last rise in the consumption tax rate in 1997 was blamed by its opponents for moving Japan's fragile economy into recession. And on November 18 2014, Prime Minister Abe declared to delay the implementation of VAT rate increase to 10 % in October 2015 to April 2016 reflecting the need to end deflation as the cornerstone to his economic policy (Abenomics). But in this paper, we assume that the VAT rate increase to 10 % in October 2015 would be implemented as originally scheduled.

Table 3. Summary of scenario inputs

	Key characteristics	Timing
S1	0 % long run interest rates 25% devaluation of the yen 0.65% increase in household consumption from wealth effect	2013 onwards 2013 onwards 2013 onwards
S2	10.3 trillion yen 1 trillion yen	Split equally 2014-19 (with smaller amounts in 2013 and 2020)
S3	4.6% reduction in import and export costs from TPP (3% reduction for agriculture and food products)	2013 onwards
S4	All of S1-3	As above
S5	S4 plus an increase in the VAT rate from 5% to 8% to 10% With revenue recycling, 20% to reduce employers' social security contributions, 20% to reduce pension contributions, and 60% to reduce government deficit	VAT from 2014 onwards
S6	S4 plus a new carbon tax to replace the VAT increase With revenue recycling, 20% to reduce employers' social security contributions, 20% to reduce pension contributions, and 60% to reduce government deficit	Carbon tax from 2014 onwards

Source: authors' compilation.

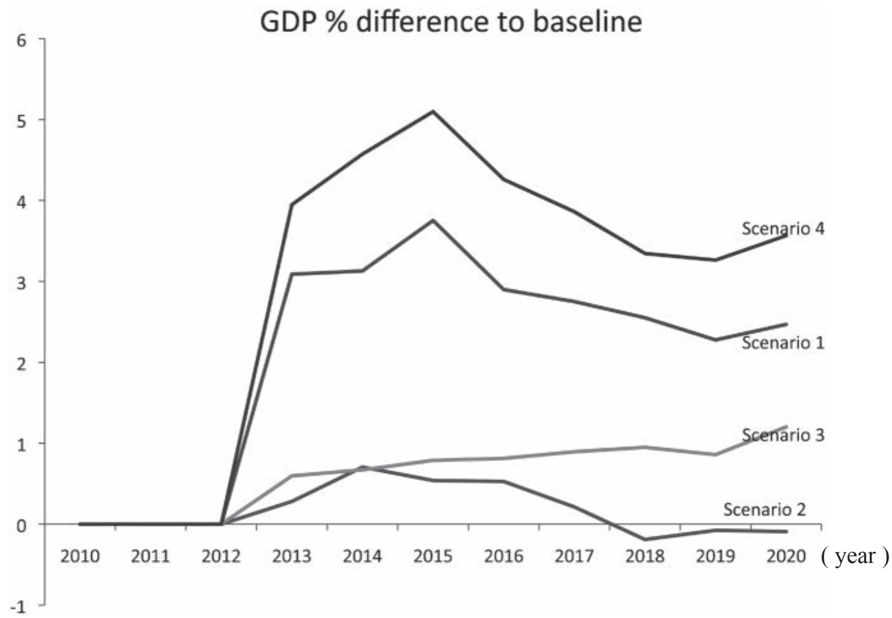
The additional revenue received from the increase in the consumption tax, which is presumed to occur in October 2015, will be recycled back into the economy. 60% of the additional revenue is to be used to reduce national debt, 20% to support employers' social security contributions and 20% to finance basic pensions. It is estimated that a one percentage point increase will make 2.7 trillion yen additional revenue.

Scenario 6 considers an alternative approach to reducing the debt. Instead of the VAT increase, a carbon tax is levied on the Japanese economy. This tax raises the same revenues as the VAT increase each year, and recycles the additional revenue in the same way as described above, so the results of this scenario are compared to Scenario 5. It should be noted that both Scenario 5 and 6 also include the Abenomics policies modelled in S4. Table 3 summarizes the scenarios.

5. Results

Despite this, the effective corporation tax rate in Japan is still high by international standards, even though the effective rate will fall from the present 38.0% to 35.6% in FY 2014 (by abolition of the special increase imposed for reconstruction of quake-hit areas). The government is considering a further reduction of the corporation tax rate after FY 2015. shows the impacts of the Abenomics policies on GDP in Japan, as percentage differences from baseline. Without any long-term financing arrangements (see next section), Abenomics produces positive GDP impacts, peaking at 2015 at 5.3% higher than the baseline without policies. The positive GDP impacts gradually lower from the peak in 2015 as the fiscal spending and initial effects of quantitative easing slow down. The structural reforms element of Abenomics (here only TPP included), however, continues to improve GDP results beyond 2015.

Figure 2: GDP % difference from base line



Source: authors' calculation

Table 4 shows a breakdown of impacts by main macroeconomic indicator. In S1, the combination of reduced interest rates, a falling exchange rates and increased household wealth means that there is an improvement in all the main indicators in 2015. Notably the increase in exports is large as it is driven by a few key sectors such as electronics, electrical engineering, and motor vehicles. In S2 the increase in GDP arises mainly from the additional investment that forms the stimulus. S3 sees an increase in both exports and imports which roughly balance, so the main gain is the consumers benefiting from lower prices.

It should be noted that in this analysis our treatment of prices is somewhat limited by the special circumstances in Japan. In most economies, an increase in inflation would be expected to reduce household expenditure but the opposite is true in Japan due to the particular circumstances surrounding deflation; if prices are declining then there is an incentive for consumers to delay purchases as goods become lower-priced over time. This continuous process depresses household consumption.

We therefore have not included in our analysis the inflationary effects from a lower exchange rate and quantitative easing, as the model results would suggest that these would depress demand. This is subject to further research; for example it could be possible to assume that due to the special circumstances in Japan (nominal) wages adjust automatically with inflation, meaning that there is no overall change in real incomes. However, it should be noted that the primary benefit of the TPP (and indeed other regulatory reform), lower prices, may be less appropriate in a macroeconomic environment that is trying to increase inflationary pressures.

By 2020, the stimulus in S2 has largely passed, so the macroeconomic effects are close to zero. There is still some remaining impact arising from S1 as a result of the continued loose monetary policy, whilst the benefits from S3 increase over the time period presented. However, if we extended the time horizon beyond 2020 it is likely that the largest long-term benefits to growth would originate from the reduction in trade prices under S3. This is as you would expect when comparing short-term stimulus with longer-term structural reform.

Table 4. GDP impacts from Abenomics policies in 2015 and 2020

(i) in 2015 (% difference from baseline)

	S1	S2	S3	S4
GDP	3.8	0.5	0.8	5.1
Consumer spending	2.5	0.1	1.0	3.6
Investment	1.0	2.6	0.1	3.8
Imports	2.1	0.4	1.8	4.5
Exports	12.2	0.1	2.4	15.1
Consumer prices	-0.2	-0.1	-1.2	-1.5
Employment	1.0	0.3	0.2	1.5

Source: authors' calculation

(ii) in 2020 (% difference from baseline)

	S1	S2	S3	S4
GDP	2.5	-0.1	1.2	3.6
Consumer spending	0.9	-0.2	1.6	2.3
Investment	0.8	0.1	0.4	1.3
Imports	3.9	0.0	1.7	5.9
Exports	10.8	0.0	2.2	13.2
Consumer prices	0.1	0.0	-2.1	-1.9
Employment	0.7	0.0	0.4	1.1

Source: authors' calculation

Table 5. Sectoral impacts on output from Abenomics policies in 2015

(% difference from baseline)

	S1	S2	S3	S4
Utilities & primary extraction	1.8	0.0	0.7	2.4
Manufacturing industries	10.1	0.6	1.4	12.3
Construction	0.8	3.3	0.2	4.3
Distributions and Retails	2.9	0.3	1.2	4.4
Transport	3.3	0.6	0.5	4.5
Business services	3.0	0.4	0.8	4.2
Non business services	1.8	0.1	0.5	2.5
Total	4.7	0.6	1.0	6.3

Source: authors' calculation

Table 5 shows the impacts at broad sectoral level for Japan at the peak of the Abenomics policies in 2015. Manufacturing industries benefit most from trade through currency devaluation as a result of QE as well as from the impacts of the free trade agreement (TPP). Construction benefits from fiscal spending as well as the investment for Tokyo 2020 Olympics. Under our assumptions, the agriculture sector as a whole also benefits from higher consumer demand in the scenarios, although it should be noted that some parts of agriculture will be adversely affected by the TPP.

In the longer term (not shown in the table), manufacturing firms are among the main beneficiaries due to increased demand as a result of the trade deal. However, it should be noted that within sectors there will be firms that gain and lose out from the reforms.

6. Financing the long-term deficit

Japan's long-term deficit is clearly a major issue for the government to deal with. IMF data show Japan's annual net borrowing at more than 8% of GDP and this figure is not expected to drop below 4% of GDP by 2019. Gross government debt is expected to stay at around 240% of GDP, leaving Japan vulnerable to a loss of confidence from international debt markets.

In this section we compare two methods to raise government finances in the long run. The first of these is the proposed increase in VAT. The second is a new carbon tax that would raise the same level of revenues.

The policy to increase a 5% VAT rate to 10% significantly dampens GDP results. It eventually makes the Japanese economy worse off in 2020 than in the baseline, cancelling the positive effects of the other reforms. This is largely a mathematical relationship: if VAT increases by 5% then so do consumer prices (with the exception of VAT-exempt goods), and real incomes fall by a comparable amount. With a multiplier effect (roughly 1.5 here), household expenditure falls further and, as it accounts for such a large share of GDP, there is a large reduction in overall output.

In Scenario 6 we introduce a carbon tax instead of the increase in VAT. The carbon tax is applied to energy-related CO_2 emissions from all sectors of the Japanese economy, on a production basis. Our estimate is that the tax would need to be set at 11,871.46 yen[10]/tCO_2 by 2020 to generate the required revenues of around 13.9 trillion yen in 2010 prices[11].

A carbon price of around \$137/tCO_2 in 2010 prices is applied to generate the same tax revenue as that raised by the consumption tax.[12] This is well above the rates seen in other countries. It should be noted that this scenario is effectively shifting a tax on consumers to a tax on mainly the power sector and industry. In the absence of international competition it is assumed that the power sector is able to pass on its higher costs in the form of an increase in electricity prices. The industrial sectors may also be able to pass on costs, depending on the structure and competitiveness of their sector (pass-through rates are estimated from historical data).

This scenario for Japan mirrors previous research that has been carried out in the EU (Pollitt et al, 2012) and the US (Carbone et al, 2013). These studies examined different ways of reducing public deficits, including through carbon taxation. The European study used a model similar to E3MG and found that higher energy taxes would be less harmful to the domestic economy than a similar increase in VAT. The US study looked at carbon taxes directly and found that the economic effects were comparable to alternative tax increases.

Our results for Japan show that introducing a carbon tax would lead to a reduction in GDP (all other things being equal) but that reduction would not be as great as if there was an equivalent increase in VAT (see Figure 3). The main reason for this is Japan's dependence on imported fossil fuels; a reduction in consumption of fossil fuels therefore leads to an improvement in the trade balance, boosting GDP. This is particularly true for the energy intensive industries levied with the carbon tax.

Furthermore both of the funding scenarios are more buoyant than they would otherwise have been as a result of the revenue recycling process described earlier. 40% revenue recycling split equally between social security rate reduction and pension's pot increase. By recycling some of the revenue back into the economy, through lower social security contributions on the part of the employers, this translates into a reduction in unit labor costs, which is then observed as a reduction in industrial and consumer prices, this effectively raises real incomes which encourages greater consumption and output, and this in turn raises employment. The impact of the contribution to the pension pot would largely be seen in consumption, output and employment results. Finally there is an interaction between the revenue recycling schemes

[10] In 2010 prices.

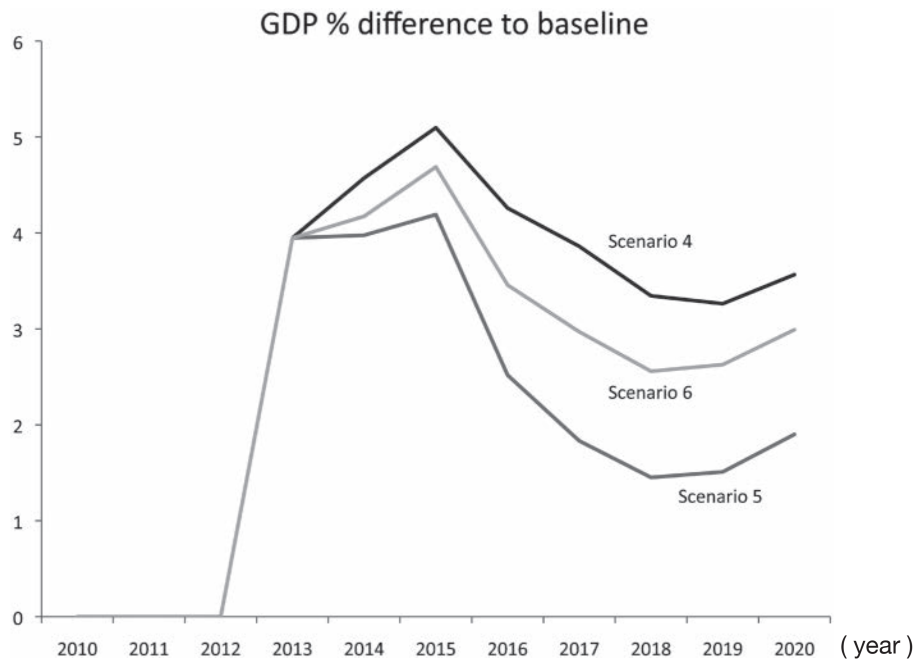
[11] To put this into context, VAT would be the largest tax revenue received by the government, at about 23 trillion yen, income tax would be the second largest source at around 13.5 trillion yen with a smaller contribution made by cooperation and gasoline taxes.

[12] The carbon tax rate increases over the period so that the revenue gathered is equal to the VAT revenue in each year. The figure above is an average of the carbon taxes applied during the period 2014 to 2020.

and the funding mechanisms, the impact of this differs between S5 and S6, and is probably more favorable for the latter combination, further exaggerating the difference between the two scenarios.

Another reason that the impact on consumer prices from VAT (S5) is significantly larger than the consumer price impact originating from S6 is the timings of when cost increases are passed onto consumers. In S6 Japanese industries may absorb some of the production cost increases from the carbon tax, in the short run, in order to remain competitive. However, in the long run the full cost increase will eventually be passed on to consumers. In contrast VAT gets applied to all sales of Japanese goods and services and is immediately passed onto the consumer.

Figure 3: GDP for scenarios 5 and 6



Source: authors' calculation

Table 6. Macroeconomic impact for scenarios 5 and 6

(% difference from baseline)

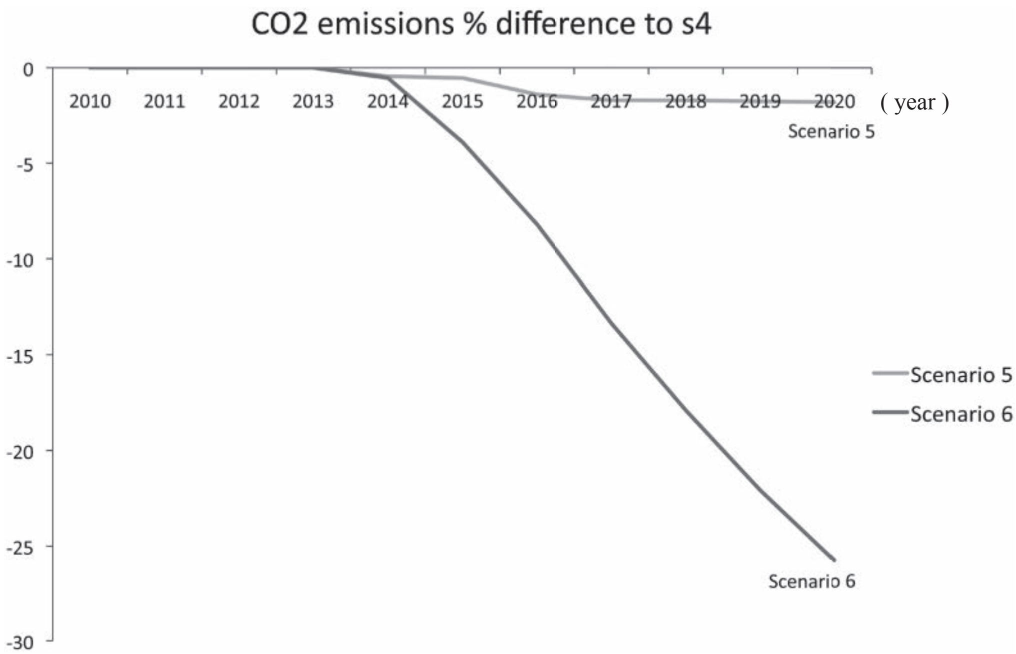
	S5	S6
GDP	-1.6	-0.6
Consumer Spending	-3.2	-1.9
Investment	-0.3	-1.0
Imports	-1.2	-3.5
Exports	0.4	-0.2
Consumer prices	5.5	3.5
Employment	-1.1	-0.4

Source: authors' calculation

It is worthwhile noting that proceeding tax changes typically there is a behavioral response which is not captured by the model as households are not able to react to announcements and engage in intertemporal substitution. In reality however agents would anticipate the VAT rise and increasing consumption of durable, and storable products in the period between when the tax change announcement until the tax change, and a reduction in the purchasing of these items post-tax hike. The Bank of Japan has estimated that in 2014 this effect contributed 0.88% to the increase in GDP, and again in 2015, proceeding the second rate rise in October consumption is expected to add 0.26% to GDP. These behavioral aspects are not explicitly captured in the model but there is evidence that the spike preceding the tax change is offset by the drop post tax change. Therefore the impact of this behavioral response is likely to be restricted to the short term.

Our analysis found that the package of policies in Abenomics leads to an increase in CO_2 emissions of around 3.5% over the period up to 2017 and then 1.5% per annum afterwards. As one would expect, however, the carbon tax also has environmental benefits in the form of reduced energy consumption and emissions. CO_2 emissions in Japan fall by more than 25% (see Figure 4). This means that in 2020 CO_2 emissions would be 22.5% lower than in 1990. This is not far from Japan's Copenhagen target of a 25% reduction in GHG emissions.

Figure 4: CO_2 emissions



Source: authors' calculation

All sectors in the Japanese economy are affected by the carbon tax so all reduce their emissions (see Table 7). In the VAT scenario there is a slight reduction in CO_2 emissions resulting from a reduction in demand for energy from households and in turn demand for electricity. In the carbon tax scenario, the emissions reduction is around 15 times bigger despite less economic costs.

Table 7. CO_2 Impacts in S6 by sector in 2020 (excludes non-energy used)

Sector	% difference from S4
Power and transformation	-19.5
Industries	-37.5
Transport	-32.8
Households	-21.8
Tertiary	-35.4
Agriculture	-29.9
Total	-25.8

Source: authors' calculation

7. Discussion and conclusions

The aim of the Abenomics package of policies is to kick-start growth in the Japanese economy. How successful this will ultimately be remains to be seen and, unfortunately, lies beyond the scope of conventional macroeconomic models.

The theory is that the stimulus provided by the package will create short-term economic growth and inflation that will turn into self-sustaining growth in the longer term. This second part will also be assisted with structural reforms. Our modelling, which is largely based on empirical evidence, suggests that there could indeed be quite a strong stimulus to GDP from the monetary and fiscal measures. For this to translate into longer-term growth requires a simultaneous increase in inflation rates, leading to sustained household spending growth, largely at the expense of savings. So, while our results are unable to say that the policy will be a success, they do suggest that the first hurdle will be cleared.

We should also pay attention to the structural reforms element of Abenomics (here only the TPP is included), which continues to improve GDP results 2015; although it also creates winners and losers. The beyond positive GDP impacts from fiscal spending and quantitative easing slow over time and it is only the third arrow (here TPP) that leads to sustainable economic growth.

The other longer-term concern in Japan is the public deficit and the level of public debt. The Japanese government must be able to provide its borrowers with confidence that it will repay its debts and it is noticeable that at least one of the policies assessed, the fiscal stimulus, will add to Japan's debt burden. Prime Minister Abe`s determination to delay the implementation of the VAT rate increase to 10% from October 2015 to April 2016 could lower trust in national finances. This might decrease the price of national bonds and raise long-term interest rates. The Japanese government needs to balance the risk of allowing debt levels to become too high, as if investors fear that the government is unable to pay the debts, higher interest rates and eventual default are possible.

In our scenarios we assessed two ways in which the public deficit could be reduced from 2014 onwards. One was an increase in VAT rates, which has already been suggested by the government, and the other was the introduction of a new carbon tax (on all economic sectors), which would raise the equivalent amount of revenues. Both measures would lead to reductions in GDP and the decision on implementation would have to be taken in the context of the stage of economic recovery. However, our results suggest that the carbon tax would lead to a smaller loss of GDP, in part due to reduced imports of fossil fuels. This tax would almost be sufficient for Japan to meet its Copenhagen pledge. Further analysis would be required to understand the possible consequences of a carbon tax on Japanese businesses but, at macroeconomic level, the results support this further assessment.

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THE STRATEGIES OF JAPANESE AUTOMOBILE MANUFACTURERS IN THAILAND UNDER THE TECHNOLOGY TRANSFER AND THE RAISING OF THE THAI WAGE SYSTEM

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Abstract

Technology transfer and technology capability building to host country is the important issues especially in the automobile industry. For this, Japanese automobile manufacturers have been playing important roles. Especially, in Thailand, Japan has been a major contributor of FDI and technology transfer. However, the new economic policy of the Thai government on wage system has started to affect the human resource development strategies of Japanese firms in Thailand. This paper shows the transition of Japanese technology transfer practices by the empirical study of automobile manufactures in Thailand.

KEY WORDS : Technology transfer, Thailand, automobile industry, human resource development strategy.

1. Introduction

The Japanese automobile industry is highly valued for its organisational innovation. Innovation is not a new thing. People have been thinking about new and better ways of doing things and trying them out in practice. Without innovation, or new and better ways of doing things, the world looks different (Fagerberg et al. 2006). There are fundamental innovations and many ways of doing things better rather than only high technological innovations.

The technology development of automobile firms has been evolutionary. It has moved from manufacturing simple customer requests to a strict policy of quality and later becoming a key player in the automotive market through design, prototype, validation, and fulfilling the innovation and technology development cycle. This long-term process has allowed firms to consolidate their innovation and technology development efforts.

In the development of the automobile industry, the American Fordism of manufacturing, which was based on standardised products, produced in long series for mass consumption by low skilled workers controlled by a hierarchy of foremen, engineers and managers, was transferred with re-innovation into the Japanese production system. Just-in-time or lean production systems were developed by the Japanese automobile industry, which combine the advantages of mass production with the flexibility to adjust to changes in the composition and level of demand (Aoki 1988). Production items and volume are decided by the market. Orders are placed on a daily or hourly basis by the firm's production department, which has to deliver the requested products just in time. This also involves parts suppliers and their systems, referred to as the zero inventory system. To increase quality and eliminate defects, organisational practices are required. This new organisational innovation needs more competent, committed and motivated workers (Womack et al. 1990).

In automobile production, innovation management systems have brought about benefits from going from assembling to becoming a company that provides added value propositions to the customer. Additionally, related to manufacture, intellectual property and social and environmental issues are important.

Technological capability building is an important issue for developing countries in terms of their economic development. Technology and knowledge have moved across enterprises and countries. Since the 1980s, Japan's foreign direct investment (FDI) has accelerated, especially after the sudden appreciation of the yen in 1985. Since then, Japan has been a major contributor of FDI and technology transfer to Asian countries. In particular, Japanese technology transfer to the automobile industry in Thailand has been intensive, playing an important role in the development of the manufacturing industry and its human resources.

However, the new economic policy of the Thai government has started to affect the human resource development strategies of Japanese firms in Thailand. The Thai government announced its intention to raise the minimum wage. From January 1, 2013, Thailand's employers must pay all employees at least 300 baht (about $10) a day, or face six months in jail and/or a 100,000-baht fine for not complying. The 300-baht minimum daily wage policy, the fulfilment of a 2011 election campaign pledge by the ruling Pheu Thai Party, has been piloted in seven provinces since May 1, 2012 (including Bangkok), with much debate and division among employers, labour unions, government ministries and academics about the actual and perceived impact of the policy on the economy, productivity, SMEs and inequality. The raising of the minimum wage might affect all wage systems.

The research questions in the paper are as follows: What is the current status and role of Japanese automobile manufacturers in technological capability in Thailand and what kinds of strategies are used for achieving high productivity and high quality production systems under the raising of the wage system.

This paper first shows the theoretical framework of this study. The past two decades have witnessed an enormous outpouring of literature on technology development in Asian countries. Among them, the role of multinational enterprises (MNEs) and technology transfer/technological capability are introduced. Then, technology transfer from Japanese industries and firms to Thailand is discussed on this issue. Second, as the empirical study, this paper shows the author's survey of automobile manufacturers in Thailand (carried out in September 2012). The empirical study shows two different strategies of MNEs in Thailand and the transition of Japanese technology transfer practices.

2. Theoretical Framework

Japanese technology transfer has been actively discussed, especially after the 1985 plaza accord. The appreciation of the yen and import substitution industrialisation policies of Asian countries accelerated Japanese relocation to these nations. Taniura (1990) pointed out that the industrialisation of Asian countries was largely influenced by Japanese relocations and technology transfer. The growth of the Japanese automobile industry in the 1980s was conspicuous because of the speed of the increase in production volumes. The rapid expansion of overseas production, integration of overseas operations into a global production network and the accompanying expansion of integrated global supply networks also attracted attention (Busser and Sadoi 2004).

With the regards to the product architecture and organisational capabilities, the automotive industry has an integral architecture and its technical innovation is relatively moderate but it requires wide experience and coordination with other members and processes (Fujimoto 2003). The expansion of Japanese global production networks in Asia, especially in NIEs and ASEAN members such as Thailand, Malaysia, Indonesia, the Philippines and Vietnam, has been studied and cases of technology transfer evaluated (Taniura 1990; Itagaki 1997; Koike and Inoki 1990; Busser and Sadoi 2004). Studies show host governments have applied industrial strategies to create a cluster policy in their automotive sectors, which draw on MNEs to enhance automotive industries (Taniura, 1990; Sadoi, 2003).

To enhance these industries, many Japanese MNEs have shown the importance of human resource management (Itagaki 1997). In particular, the Japanese skill formation system is a key factor to successful technology transfer (Koike and Inoki 1990). Japan developed a skill formation system in the early years of its development. As Japanese technology transferred, the importance of human resource development in industries was evaluated in host countries. In high skill-based industries, a firm-based system of training is strongly associated with complementary personnel policies such as seniority wages and internal career ladders (Thelen 2004; Sadoi 2009).

Rising labour costs in Japan have driven the relocation of a significant share of production from Japan to Asian countries. Japan, which has developed high skill and technology-based industries, has expanded production in ASEAN and transferred its skills and technology in the process. For Thailand, as well as other ASEAN countries, Japanese relocations have become a major source of technology. Thailand's economic growth rate in the 1980s and 1990s paralleled that of its more technologically sophisticated neighbours such as Malaysia, Singapore, South Korea and Taiwan; yet, its technology development lags behind quite significantly (Wang and Chien 2007).

By 2000, the division of labour in the automobile industry saw carmakers in Thailand specialising in assembly and their Japanese side specialising in engineering and R&D processes (Yamauchi et al. 2009; Poon and Sajarattanochote 2009). However, Thai firms' specialisation in this division of labour has since 2000 showed signs of shifting towards upstream activities. The three major factors behind this shift are the government's commitment to liberalisation policies in the early 1990s, the aftermath of the Asian financial crisis and the expansion of Japanese investment and technology transfer to Thailand (Poapongsakorn and Techakanont 2008).

The shift was impossible without technology transfer from Japanese firms, which was necessary to upgrade the technological capability of local employees as well as their suppliers. Global competition has led carmakers to consolidate their dispersed operations as a network (Ernst and Kim 2002). The shift has been accelerated by the production and export base for pickup trucks of major Japanese carmakers. In addition, the International Multipurpose Vehicle project by Toyota Motors preceded the technological capability of Thailand. This project involved a large number of Thai engineers developing and producing cars in Thailand.[1] The expansion of the production volume of automobiles has increased the demand for technological capability in Thailand.

Sadoi (2010) surveyed the development of the technological capability of Thai engineers, by assessing the range of Thai engineers' responsibilities in R&D divisions. The author showed the division of labour in R&D between Japanese experts and Thai engineers in Thailand and found that the value of Thai responsibilities were gradually increasing, but that a large part of R&D activities were still the responsibility of Japanese experts.

Domestic market-oriented affiliates generally purchase more locally than export-oriented firms because of lower quality requirement and technical specification (Reuber 1973). As Thai automobile assemblers shifted from domestic-oriented strategies to exports after 2000, higher quality and technical specifications were required for local suppliers. Technological capability is used interchangeably with 'absorptive capacity', the capacity to absorb existing knowledge and in turn generate new knowledge (Kim 1997). Firms with high absorptive capacity are likely to benefit from FDI spillover (Narula and Marin 2005). Judging from Kim's (1997) four elements of technological capability, production capability, investment capability and innovation capability, Thailand has achieved high production capability and is establishing investment capability.

Thai suppliers are now increasingly required to upgrade their quality and precision levels to meet international standards (Techakanont 2011; Sadoi 2010). To achieve this, Japanese assemblers have begun to train engineers and technicians in supplier firms so that they can specialise horizontally based on core competences (Yamauchi et al. 2009). Poon and Sajarattanochote (2009) examined the role of Asian manufacturing subsidiaries in technology transfer in Thailand, focusing on the manufacturing activities of firms from Japan and NIEs. Poapongsakorn (1999) and Yamauchi et al. (2009) showed the significant effects of human resource development on automobile productivity in Thailand.

Under these circumstances, the Thailand Automotive Institute of the Ministry of Industry in Thailand released a master plan for 2012–2016 to enhance the technological base of the Thai automobile industry. On the other hand, the Thai government raised the minimum wage. Since January 1, 2012, Thailand's minimum wage has been a nationwide flat rate of Bt 300 per day. This was a piece of government propaganda for election purposes, but given the extensive damage that followed the flooding hitting Thailand just after the Yingluck administration came to power, many employers felt that the increase was too high, and there was a strong reaction from industries. This caused the implementation of the new legislation to be delayed.

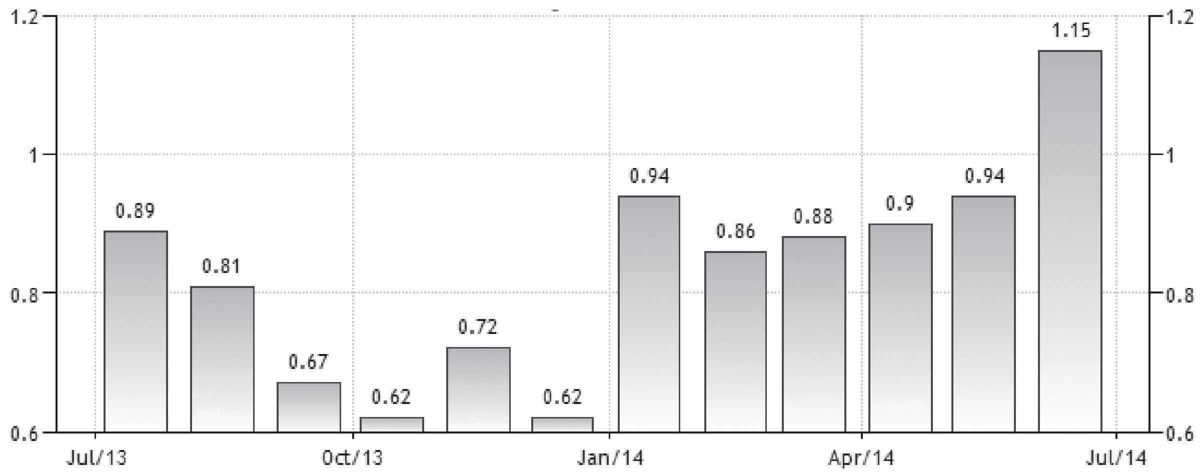
In April 2012, when the new minimum wage level of Bt 300 per day was introduced in Bangkok and five neighbouring provinces, where wages were already comparatively high, the increase for the rest of the country was just a flat rate of around 40% (JRI 2013). For low income provinces, the new minimum wage was a particularly big increase. For example, in Phayao province in northern Thailand, the daily minimum wage almost doubled from Bt 159 to Bt 300. It is estimated that some 5.4 million

[1] The definition of an Asian car is a new model developed and produced in Thailand for the Asian market except Japan.

people in Thailand earn less than the Bt 300 minimum daily wage (JRI 2013).

In addition to the new minimum wage, the Thai labour market was undergoing big changes. For example, Thailand's unemployment rate was extremely low. As shown in Figure 1, in 2013 and 2014, the unemployment rate was low (0.62% at the end of 2013 and beginning of 2014). Nevertheless, the implementation of government policies related to income security in agricultural communities weakened the supply of labour to the cities. In addition, the effects of the rapid decline in the birthrate and the ageing of society in Thailand cannot be ignored. The total fertility rate of Thailand was 1.5 in 2009, 1.4 in 2010, 1.4 in 2011 and 1.4 in 2012 (The World Bank 2014). The situation of labour shortages in cities and manufacturing industries will continue. Therefore, increasing labour cost might change the technology capability building of Japanese firms.

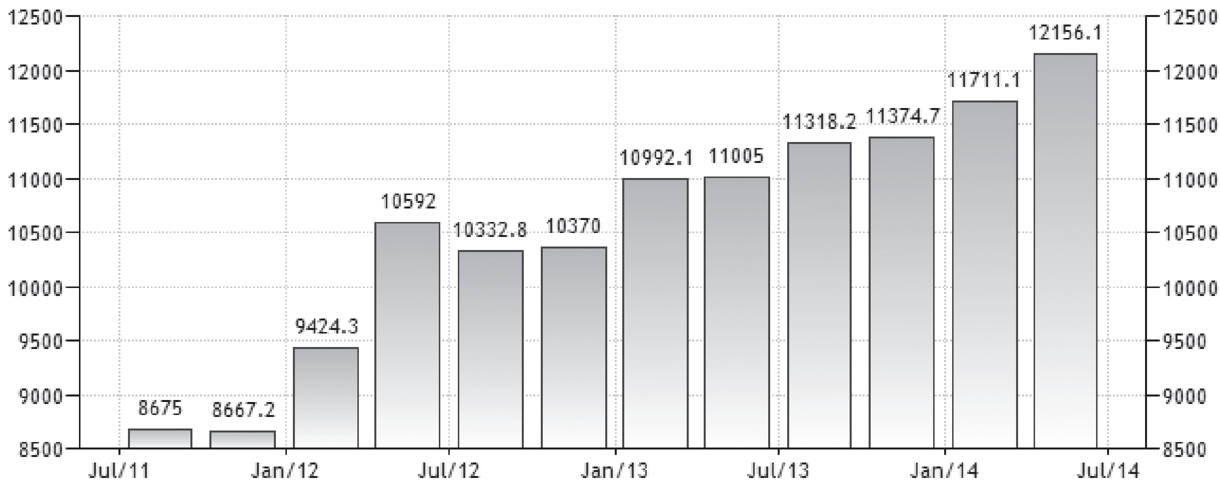
Figure 1: Unemployment rate in Thailand (percentage of the labour force)



Source: Trading economics 2014

In the cases of the MNEs of Japan and other foreign firms, their wage levels were already higher than the Bt 300 minimum daily wage. However, the raising of the minimum wage level forced them to review their salary structures. Therefore, for MNEs, wage costs were expected to rise by about 10%. Figure 2 shows Thailand's average monthly wages in manufacturing from July 2011 to July 2014. Compared with the average wage of July 2011, that of July 2014 shows about a 50% increase.

Figure 2: Thailand Average Monthly Wages in Manufacturing (Unit: Thai Baht)



Source: Trading Economics 2014

This section showed studies of Japan's role in technology transfer and upgrading technological capability for host countries. As the major host country, Thailand has developed its automobile technologies, for both automobile makers and suppliers. However, from 2012, Thailand has shown significant increases in labour cost as well as labour shortages. Accordingly, Japanese MNEs are facing a transitional phase for their Japanese style of human resource development system that has been applied since the 1980s.

3. Empirical Study

Under these circumstances, how is Japanese technology transfer in the automobile industry affected? What are the responses of Japanese firms in terms of technology transfer? In response to the Thai minimum wage increase, many companies are searching for ways out of this financial difficulty. The minimum wage increase influenced Japanese automobile manufacturers to raise not only minimum salary, but also their entire wage systems accordingly.

In this paper, two different approaches of Japanese automobile manufacturers in Thailand are examined. These firms are trying to improve quality and productivity under the pressure of this increase in labour cost. The author's research and interviews at Toyota Gateway and Mitsubishi Motors Thailand (MMTH) in September 2012 were introduced and examined as these two different approaches.

The Case of Toyota Gateway

First, the Toyota Gateway plant case is examined. This case shows the implications of a new set parts supply (SPS) system in the shortest production line.

In Thailand, Toyota Gateway, which has a production capability of 100,000 units in 1996, increased its capacity to 200,000 by 2006. During the Lehman financial crisis, production volume declined; in 2011, it reached 177,000 with a tact time of 58 seconds. In September 2012, capacity was 228,000, but with 3.3 hours of overtime on four shifts and production at weekends, the production volume reached 270,000.

The strategy of Toyota Gateway was to increase production volume and secure quality products with minimum investment. For this, it implemented its SPS system.

In Toyota (as a whole company in Japan and overseas), SPS was first introduced in 2002 as a part of the "Breakthrough Toyota" activity for in-house cost reduction. SPS was expected to be an effective tool to simplify assembly processes. In SPS, the assembly process of parts pick up and parts assembly are separated. In parts yards, apart from the assembly line, all the parts for a car are selected and set in a cart and delivered to the assembly line operator. Operators can concentrate on assembly, and do not think about the selection of the parts on multi-vehicle production lines. Therefore, operators can master their assembly skills in a short period. Therefore, SPS is beneficial for ensuring quality and productivity in the initial phase of a new model launch. The SPS production system was first implemented at the Tsutusmi plant in 2004 and it expanded to a new plant in Japan and overseas from 2006.

The implementation of the SPS production system in Toyota and several industries can be beneficial in terms of its short introduction period, short training period for operators and high quality and productivity in the initial phase. However, according to Nomura (2008), SPS has its own shortcoming, because additional operators have to be hired for the task of searching, reaching and picking parts. In addition, this system will create non-multitasking workers with less experience on assembly lines.

The features of the SPS production system were surveyed by the author in September 2012. SPS was introduced in 2006 in order to reach 200,000 units. The production line is for five models on one line using three platforms. The total parts are over 8,000. There are 5,500 employees over two shifts. The eight Japanese coordinators are stationing, plant director, vice plant director, and heads of six department, plant administration, press body, paint, assembly, quality control, and CKD for Indonesia.

SPS sets all the parts for a car in a cart in order. Bulky parts are delivered in order by a line side. Local parts are delivered in 36 lanes. The production volume of a day is divided into 36.

The ideal distribution balance of formal and temporary employees is 60:40 or 70:30. As of September 2012, temporary workers reached 60% of total employees. Temporary workers are eligible to be formal workers after two years of employment. In Toyota Gateway plants, the turnover rate is 1.8% per year, which is extremely low compared with other firms in Thailand. Formal employees receive medical benefits and family allowances.

SPS starts after the production process of painting because the direct go-through ratio of painting is low. Usually, 30 to 40 vehicles are kept in buffer in the painting process. The go-through ratio of the assembly line is about 97.6%. Under the usual 58-second tact time of production line speed, the go-through assembly ratio drops to 90%.

Under a production volume of 100,000 units per year, this was good enough for 78 operation items (points) with normal production. However, in 2006, when Gateway decided to increase production volume to 200,000, there were two choices: increase one more line or introduce SPS. Gateway selected the latter because of the lower cost and greater flexibility to meet the changes in production volume. Thailand had experienced several crises and sudden drops in production volume, such as the Asian financial crisis in 1997, Lehman shock in 2008 and flood in 2011. Therefore, SPS was the better choice for the Gateway plant in Thailand.

The two disadvantages of SPS, as pointed out by Nomura (2008), are creating unskilled workers and increasing the number of workers. First, the problem of unskilled workers is discussed here. The Gateway assembly line is divided into two parts, namely setting parts storage and the assembly line. Operators in parts storage concentrate on selection and setting parts on a cart and delivering these to the line. Operators on the assembly line pick up parts from the cart and assemble. There is no Kanban on the line. This means there are single task assembly operators on the assembly line. The first disadvantage of the SPS system is that it is difficult to create multi-skilled operators on the production line. Therefore, a single task operation line tends to find it difficult to create multi-skilled operators.

The second disadvantage of SPS is that the number of operators in parts storage increases. In Japan, as labour cost is extremely high, SPS is only carried out at the Tsutsumi plant for experiment purposes for overseas implementation.

As observed, in response to the increase in the minimum wage in Thailand, Toyota Gateway implemented SPS. This seems a rather opposite strategy to increasing the number of unskilled employees. However, in order to meet the unstable sudden increase in production volume, it is an effective choice. In addition to the extremely low turnover rate, high job popularity is shown here. This strategy of implementing SPS might be effective only some selected firms like Toyota who was supported by high demand of job applicants. Otherwise, it is not a good choice for this situation in Thailand.

The Case of MMTH

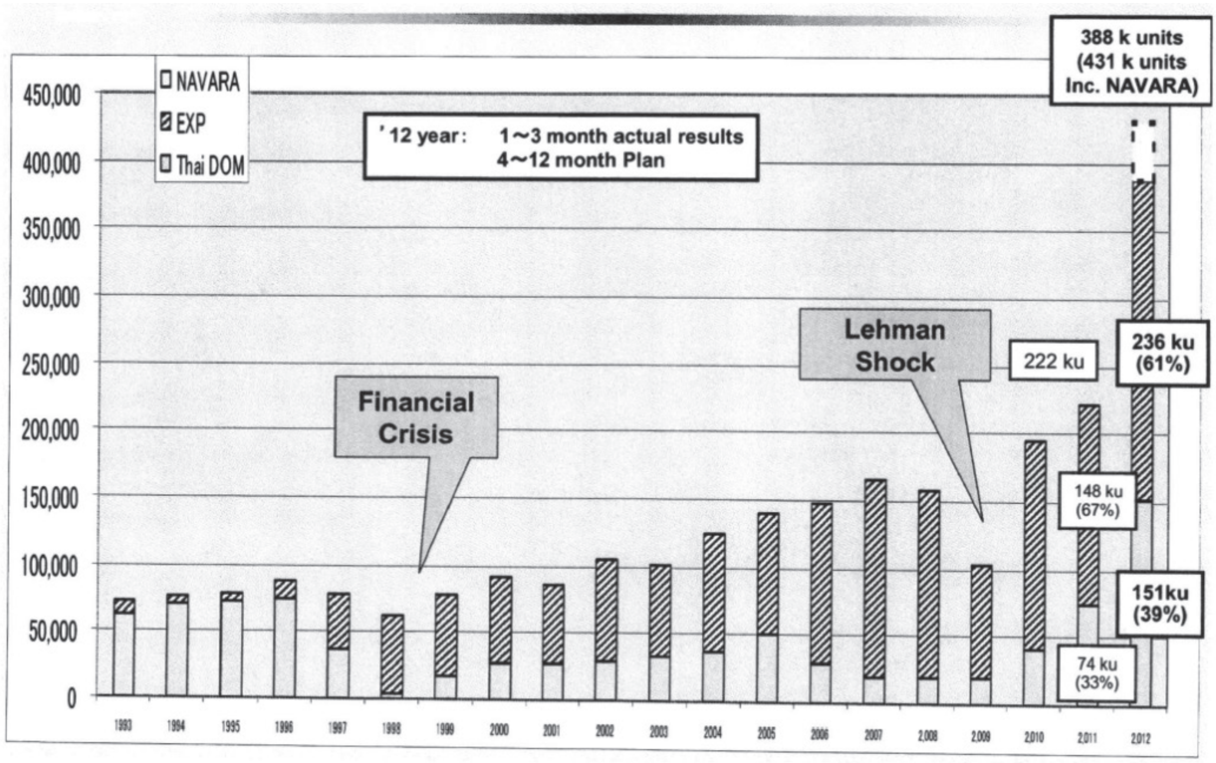
The other strategy is shown by using the case of MMTH surveyed by the author in September 2012. MMTH is located about 150 km south of Bangkok, about 3.5 km from the export port of Lamchaban. It is located next to the major port. Just after the MMTH assembly lines, test drivers drive all the vehicles directly to the port.

MMTH was established as MMC Sittipol Co. in 1987 in Bangkok. Then, in 1992, Laemchabang plant No. 1, close to Laemchabang port, started operation, followed by Laemchabang plant No. 2 in 1996. In 2003, MMC Sittipol Co. changed its name to MMTH. In 2012, Laemchabang No. 3 plant started operation. As of August 2012, the total number of employees was 7,559. Among them, 105 were Japanese dispatched from Japan and 3,729 were temporary employees. Nearly 60% of operators are temporary workers, but they are all Thai operators, not foreign workers.[2]

MMTH Laemchabang has three plants. The No. 1 plant has a mixed production line of five different models: three different types of pick-up trucks, namely Triton, L200 and Pajero Sport, and two kinds of passenger cars, namely Lancer and Lancer EX. Production capacity is 15.5 units per hour, or 90,000 units per year. The No. 2 plant produces pick-up trucks for two types at a production capacity of 38 units per hour, or 220,000 units per year. The No. 3 plant, which was newly built in 2012, has a production capacity of 26.8 units per hour, or 150,000 units per year. Figure 3 shows the production volume of MMTH from 1993 to 2012. It shows a steady increase in production volume. The drops in volume during the two financial crises in 1998 and 2009 were relatively small because MMTH targets exports, even before the financial crisis in 1998.

[2] In the manufacturing industry in Thailand, there are large numbers of unskilled foreign workers from neighbouring countries such as Myanmar, Cambodia and Laos. The number of foreign nationals legally employed in Thailand under the terms of the Department of Employment total 2,304,700 persons. Of these, 1,736,740 are from Myanmar followed by Cambodia (Thai PBS August 21 2014).

Figure 3: Production Volume of MMTH (1993–2012)



Source: MMTH

The third Laemchabang plant started at the same time the Thai government introduced its minimum wage increase. Therefore, MMTH prepared and implemented a new strategy using the new third plant project.

The third plant's new strategy of mass production is rather opposite to a lean production system. MMTH tried to change several new production and supply systems. These were (1) to increase in-house parts production and (2) to re-select suppliers and to shift from a sequence parts supply system to a lot parts supply system. Those attempts aimed to reduce production cost and increase productivity.

(1) To increase in-house production. In-house production was targeted to increase from 12% to 40% in 2013 in order to ensure that production quality was less dependent on suppliers. The rapid production increase and new model for the third plant in 2012 made it difficult to find new qualified suppliers to meet MMTH's high demands of quality and on-time delivery.

In addition, for preparing to raise the wage structure, robots were used 40% of the time in MMTH, compared with 95% in MMC Japan. Nevertheless, the ratio 40% in MMTH is extremely high compared with average manufacturing plants in Thailand.

(2) To re-select suppliers and to shift from a sequence parts supply system to a lot parts supply system. Along with the increase in the in-house production ratio, suppliers were re-selected. MMTH implemented a lot production system, which reverses their lean production system implemented before. Instead of implementing a higher level production system, they implemented a lower technology or simpler production system to lower the burden on suppliers. Figure 4 shows the ratio of sequence and lot delivery at MMTH as of September 2012. In the Assembly department, only 32% of parts were delivered in a final fixed order sequence from supplier to assembly lines. These are bulky parts located close to MMTH. Bulky parts located far from MMTH, about 7%, are delivered by using an estimated sequence order to MMTH and arranged in final sequence order in-house. The remaining 61% of parts are delivered in lot. Nearly half of them are arranged sequence order in-house. In the Welding department, 87% of parts are delivered in a final sequence order.

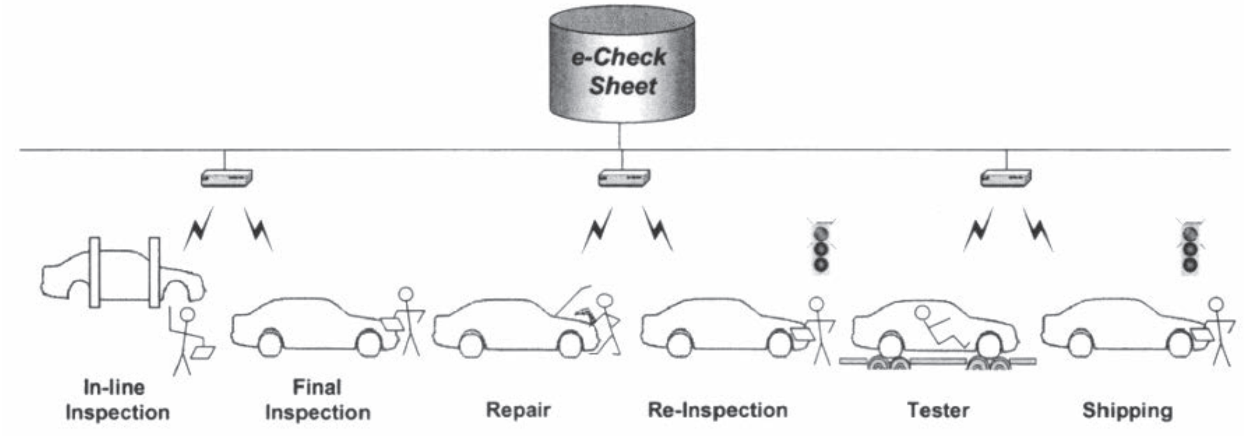
Figure 4: The Ratio of Sequence and Lot delivery at MMTH as of September 2012

	Delivery from Supplier	Line delivery	Parts type	%
Assembly	Sequence (final fixed)	←	Bulky, close location	32%
	Sequence (estimated)	In-house Sequence	Bulky, far location	7%
	Lot	←	Small	35%
	Lot	In-house Sequence	Small, far location	26%
			Total	100%
Welding	Sequence (final fixed)	←	Bulky	87%
	Lot	←	Small	13%
			Total	100%

Source: MMTH

In order to change the delivery system and improve quality, MMTH introduced an e-check system, through which quality employees with tablet computers check checking points called quality check gates (QCGs), as shown in Figure 5. The QCG system was introduced in order to authorise inspection data, control the inspection and repair processes, control quality gates and manage quality data. The number of QCGs was nearly doubled compared with conventional systems. In particular, export vehicles to Japan applied extra QCGs to assure the high quality standard required in Japan. The major additional tests for Japanese exports are the shower test and painting quality check (two times). In addition, in Japan, they do additional quality test at import ports in Nagoya.

Figure 5: QCG System



Source: MMTH

The case of MMTH showed the backward movement for an automobile manufacture from lean production to lot production. However, it was their strategy to meet Thai suppliers' current technology capability, not demand too much technological pressure for suppliers to meet sequential order supply.

Off course, sequential order supply is beneficial for an assembler both improving productivity and quality. It is still burden for Thai part suppliers who are in initial phase. Especially for a new model development process, it is rather difficult to meet the quality and productivity at the same time in short term. New model development period is getting shorter and shorter in recent years, and the quality and technology requirements are getting higher and higher. The MMTH has been technological supporting for local suppliers to produce new parts for new model. However, because of shorter period and higher demands, local suppliers are not yet ready to fulfil all the requirements from their assembler. Therefore, MMTH choose this backward strategy to allow local suppliers to concentrate on their minimum quality and technological requirements. At the same time, MMTH took priority for quality and low cost for local suppliers. Then, MMTH plays the role of quality check and production management in house.

This section reviewed two different strategies, Toyota Gateway and MMTH. It showed that leading automobile manufacturers in Thailand are trying to improve and adjust their production systems to be more competitive in this transition period in Thailand.

4. Conclusions

This paper examined technology transfer by Japanese automobile manufacturers in Thailand under the increased pressure of labour cost. Two different strategies were surveyed and introduced. The first case shows the Toyota Gateway plant and the second case shows MMTH.

Under the raising of the minimum wage in Thailand, the entire wage structure was upgraded and this increased total labour cost for manufacturers. In order to reduce production cost but keep a high quality level, Japanese manufacturers were trying to find different ways.

The Toyota case showed the implementation of SPS, which achieved the highest level of all Toyota plants in the world. In fact, SPS is used in only one plant in Japan as an experiment. However, SPS cannot create multi-skilled workers. As a result, from the viewpoint of technology transfer and creating multi-skilled workers, the raising of the minimum wage in Thailand prevented Toyota from technological upgrading.

The case of MMTH showed the shift from lean production to a lot production system. This gives a wider selection of suppliers without the requirement of sequence delivery and other higher demands from manufacturers. It thus might be possible to lower parts cost and provide easier entry for Thai parts suppliers. On the other hand, without the high requirement of sequence production or

Kanban delivery, Thai suppliers might have less chance to learn the high technological production system. MMTH's decision was to increase quality checks in-house and become less dependent on local suppliers' technological development.

These two cases showed the trend towards the negative impacts on the human resource development of Thai manufacturers under the raising of the Thai minimum wage. However, it is also true that there is high demand for engineers and higher technicians in Thailand. For that, Toyota and MMTH implemented R&D activities as well.

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三重県の企業と愛知県の企業の台日産業提携に対する視点の比較

COMPARISON OF THE INDUSTRIAL VIEWPOINTS FOR TAIWAN-JAPAN INDUSTRIAL ALLIANCE BETWEEN MIE PREFECTURE AND AICHI PREFECTURE

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要旨

本研究は，三重県と愛知県の企業の台日産業提携に対する視点を比較することを目的としている。分析の前提として，両県企業の海外投資動向やその特色を点検し，また，台湾政府と地方自治体間における産業提携覚書が，日本企業の台日産業提携に対するインセンティブとして有効か否かを把握するために，三重県と愛知県の企業にアンケート調査を実施した。調査結果によると，両県の企業の台日産業提携の発展に対する視点には差異が少ない。三重県は台湾政府と既に産業提携覚書を交している。したがって，三重県の企業は愛知県の企業より台湾企業と提携したい意向がより強く，提携の方向も把握している。しかし，台湾と三重県双方の産業提携が開始されて間がないために，成功例は少ないので，覚書を交していない愛知県企業との視点の差異は小さいのかもしれない。それでも，今回のアンケート調査の分析から，今後の台湾と日本の地方自治体との連携のあり方について重要なヒントが得られたと考えている。今後とも，台湾と日本の間の産業提携の進捗状況をウォッチし，その成功要因と失敗要因を分析し，課題を見出していくことは，重要な仕事になるであろうが，その意味でも本研究は多国間産業提携のあり方の研究に，一石を投じることになると思われる。

キーワード：アライアンス，産業提携，台日関係，三重県，愛知県

1. はじめに

台湾政府は，台日の産業・企業の提携・交流を促進するため，2011 年 11 月に「台日産業提携架け橋プロジェクト（中国語 : 台日產業合作搭橋方案)」を策定・推進している。また，このプロジェクトによる仕組み作り，補助金，技術開発などの措置に注力しており，さらに，積極的に日本に渡り，日本の地方自治体，産業・企業に宣伝している。台日産業連携推進オフィス（TJPO）の統計資料によると，2014 年 2 月までに，TJPO は日本の 26 の地方自治体と交流･提携の交渉をしてきたが，しかし，現在のところ正式に産業提携覚書（MOU）を締結した地方自治体は，僅か三重県と和歌山県両県のみである。この「台日産業提携架け橋プロジェクト」は，台日産業提携に対してインセンティブの効果を発揮できるのか。それが「台日産業提携架け橋プロジェクト」を実施したことが成功するか否かの鍵である。また，政府間で産業提携覚書を締結したとして，台日産業提携に対してインセンティブの効果が高く発揮できるか否かも注目される。

日本では，東日本大震災により東北地方の産業インフラがダメージを受けたのを契機に，東海地方の地方自治体は県内への投資誘致と観光誘致のため，日本政府や他の地方自治体より率先して，台湾政府との交流 提携を積極的に進めている。三重県は 2012 年 7 月に TJPO と MOU を締結して以降，「官・学・産」という三角提携の形態作りと海外展開支援の政策を推進しているので，他の地方自治体より台湾との交流・提携が盛んになっている。今回検討の対象として，愛知県と三重県の企業を採用したが，2012 年の総務省の統計によると，東海の地方自治体の中では，三重県と愛知県両県の輸送機械と化学の製造品出荷額が非常に大きい。それに加えて，三重県と愛知県の付加価値額は全国の付加価値額の構成比で見ると，各々全国の第 8 位と第 1 位を占めている [1)]。そのため，産業構造が類似していて，他の東海地方の自治体より高い付加価値額を算出している三重県と愛知県を，全国の地方自治体の代表として，台日産業提携の誘致政策の影響を捉えることは，意義深いことと考える。

しかし，2011 年 11 月の「台日産業提携架け橋プロジェクト」実施以降，その日本企業の台日産業提携に及ぼす影響，動向に関する研究は非常に少ない。一方，東日本大震災以降，台湾と日本の両国は以前より交流や提携を盛んに行っている。台湾と日本の産業提携が促進され，そして，台湾と日本の産業競争力が向上し，台湾と日本

双方の産業をWin-Winの関係に発展させることが期待されている。そのため，本研究では，この分野の研究に寄与するために，両県産業の海外投資動向とその特色を加味しながら，台湾政府とMOUを提携している三重県と，MOUを締結していない愛知県の企業の台日産業提携に対する視点を比較することにしたい。また，その結果を前提に今後の台日産業提携のあり方を考えることも本研究の目的である。

本研究では,「三重県の企業と愛知県の企業の台日産業提携に対する視点の比較」をテーマに，その構成は，第一章では，研究の背景と目的などを述べ，第二章では，両県の企業アンケート調査の実施状況と調査結果を説明する。第三章では，両県と台湾における経済・貿易の関係を分析し，第四章では，両県の産業に対して台日産業提携政策が与える影響，両県企業の台湾企業と提携をする意向，台日産業提携に対する課題などを把握することにしたい。第五章では，積極的に台湾企業と提携・交流している両県の企業事例を取り上げる。そして，本研究のアンケート調査結果との対比を見ることにする。最後に,「おわりに」において研究結果，台日産業提携の発展の在り方を取り上げる。

2. 三重県と愛知県の企業アンケート調査の実施状況

本研究では，先行文献の調査や各種データの分析などを中心にする。また，東海の地方自治体，日本の関係機関，三重県と愛知県の企業に所属する専門家に対して，詳細なインタビュー調査を行うことにした[(1)]。さらに，三重県と愛知県の企業に対してアンケート調査を実施した。続いて，本研究によるアンケート調査について説明する。

(1) アンケート調査の対象企業，調査方法と調査期間

このアンケートの調査対象は三重県と愛知県における企業である。三重県は，公益財団法人三重県産業支援センター（企業数は680件），三重県中小企業団体中央会(400件)，三重県商工会議所連合会（20件），ジェトロ三重（350件），三重県中小企業家同友会（300件），三重県庁（164件）などの機構の関連企業の合計1,924件（社）を対象にアンケートを送付した。調査方法は，主にメールを使用し，またメールが届かなかった企業にはFAXで再送した。抽出方法は任意で抽出をした。アンケート調査内容による回答項目は単一回答と複数回答の二種類がある。調査期間は2013年8月1日～8月31日である。回答が不完全な企業に対しては追加調査を行った。追加の調査期間は2014年10月～11月である。一般的にメールでの調査への返答率が低かった。この調査で，回答した有効なアンケート企業数は77社であった。回答率は高くはないが，4.0%に達している。

次に愛知県について説明する。愛知県中小企業家同友会に登録している約3,400社と業種を補うために，ホームページから取った約10社を基礎データとした。この調査データを基に任意抽出した約130社にアンケート用紙を郵送した。調査期間は2013年8月1日～8月31日である。アンケート調査内容による回答項目は単一回答と複数回答の二種類がある。アンケート調査内容による回答項目は三重県と同じである。同様に，回答が不完全な企業に対しては追加調査をした。追加調査期間は2014年9月までである。最終的に回答した有効なアンケート企業数は57社であり，アンケートの回答率は43.84%に達している。

(2) アンケート調査結果と産業・企業の属性

ここでは，回答企業の属性を説明する。先に，三重県から見る。従業員数別に見ると，300人以上の企業は12社であり，全社数の15.58%を占めており，300人未満の企業は65社であり，全社数の84.42%を占めている。資本金別に見ると，3億円以上の企業は12社であり，全社数の15.58%を占めている。3億円未満の企業は65社であり,全社数の84.42%を占めている。最後に業種別に見ると，製造業は64社であり，全社数の83.12%を占めている。その他，卸売業と設備・総合・職別工事業が各3社であり，各々全社数の3.9%を占めている。医療・保健衛生業は2社で，全社数の2.6%を占めている。そして，残る産業は農業，運送業（鉄道，道路，水運，航空），電気・ガス・熱供給·水道業，教育，学習支援業などの業種である。

次に愛知県について見る。従業員数別に見ると，300人以上の企業は6社であり,全社数の10.53%を占めており，300人未満の企業は51社であり，全社数の89.47%を占めている。また，資本金別に見ると，3億円以上の企業は1社のみであり,全社数の1.75%を占めている。3億円未満の企業は56社であり，全社数の98.25%を占めている。最後に業種別によると，製造業は36社であり，全社数の63.16%を占めている。卸売業は6社であり,全社数の10.53%を占めている。小売業は5社で,全社数の8.77%を占めている。そして,残る産業は情報サービス業(3社)，運送業（鉄道，道路，水運，航空）(3社)，飲食サービス業（2社），設備・総合・職別工事業（1社），電気・ガス・熱供給・水道業（1社）などの業種である。

総じて，今回のアンケート調査対象企業は，日本企業

表１　三重県の企業と愛知県の企業のアンケート調査の回答企業の状況　(単位：社，％)

項目　地域別	三重県		愛知県	
(1) 従業員数別	社数	構成比	社数	構成比
300 人以上	12	15.58	6	10.53
299 人～ 100 人	15	19.48	8	14.04
99 人～ 50 人	20	25.97	14	24.56
49 人～ 20 人	12	15.58	13	22.81
19 人以下	18	23.38	16	28.07
合計	77	100.00	57	100.00
(2) 資本金別	社数	構成比	社数	構成比
3 億円以上	12	15.58	1	1.75
3 億円未満～ 1 億円以上	4	5.19	4	7.02
1 億円未満～ 5,000 万円以上	19	24.68	11	19.30
5,000 万円未満	42	54.55	41	71.93
合計	77	100.00	57	100.00
(3) 業種別	社数	構成比	社数	構成比
製造業	64	83.12	36	63.16
農業	1	1.30	1	1.75
設備・総合・職別工事業	3	3.90	3	3.90
運送業（鉄道，道路，水運，航空）	1	1.30	3	5.26
卸売業	3	3.90	6	10.53
小売業	1	1.30	5	8.77
宿泊業	1	1.30	—	—
教育，学習支援業	1	1.30	—	—
医療・保健衛生業	2	2.60	—	—
食品サービス業	—	—	2	3.51
情報サービス業	—	—	3	5.26
電気・ガス・熱供給・水道業	—	—	1	1.75
合計	77	100.00	57	100.00

注：本研究のために行ったアンケート調査結果を整理したものである。

の規模別分類によると，資本金が 3 億円未満や職員数が 300 人以下の中小企業に集中している。

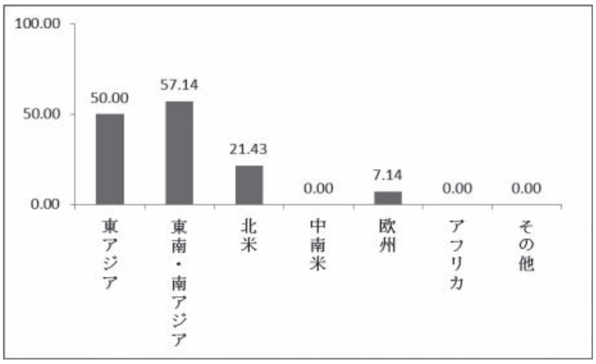
3. 三重県・愛知県と台湾の経済・貿易の関係

ここでは，アンケートの前提となる三重・愛知両県と台湾との経済・貿易関係を見ることにする。2013 年の台湾経済部の統計資料によると [2]，日本は台湾にとって，第 1 位の輸入相手国，第 4 位の輸出相手先，第 1 位の貿易赤字計上国である。また，1952 年から 2013 年までの台湾への外国人投資件数と外国人投資金額をみると，日本は各々第 1 位と第 4 位を占めている。一方，ジェトロの統計によると [3]，2013 年の日本の台湾に対する輸出入金額が日本の全輸出入金額に占める比率は各々 1.57％と 1.42％であり，また，2013 年の日本の台湾に対する対内・外投資金額が日本の全対内・外投資金額に占める比率は各々 0.25％と 1.01％である。よって上述の統計から見れば，台湾は日本にとって，その貿易取引規模と投資規模という点では依然として小さい存在である。しかし，台湾は東海地域にとっては，アジア地域の中で重要な貿易・投資相手国の一つである。次に両県と台湾の交流について述べる。

(1) 三重県・愛知県と台湾との投資の関係

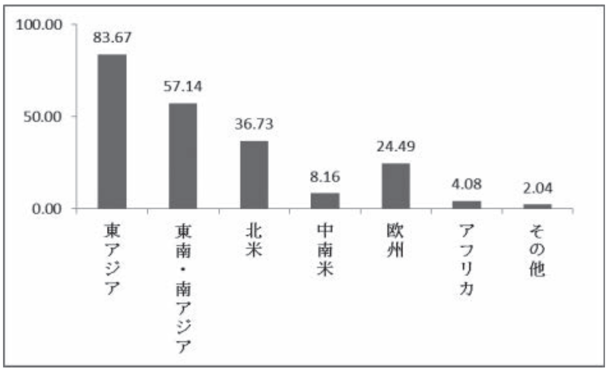
先に，両県と台湾との投資の関係について見る。まず，愛知県から見てみよう。『2012 年おける愛知県内企業の海外事業活動』によると [4]，2012 年の愛知県の海外投資企業数は 2,195 社に達している。その中で，台湾へ投資した企業数（87 社，構成比 3.96％）は，中国（23.05％），欧州（15.62％），アメリカ（10.15％），インドネシア（5.33％）などの国・地域より少なかったが，しかし，韓

図１　愛知県の企業の海外進出先相手国　（単位：％）



注１：回答項目は複数回答である。
注２：本研究のために行ったアンケート調査結果を整理したものである。

図２　三重県の企業の海外進出先相手国（単位：％）



注：図１に同じ。

国（3.23％），インドネシア以外の東南アジア諸国などより多かった。また，本研究の調査結果によると，図１に示すように，愛知県の企業の海外投資は「東南・南アジア（57.14％）」と「東アジア（50.00％）」に集中している。東アジアでは中国が最大の進出先相手国であり，そして，台湾と韓国へ進出している企業もある。東南・南アジアではインドネシア，タイ，マレーシア，ベトナムなどの国が中心になっている。

したがって，本研究の愛知県の企業に行ったアンケート調査結果は，アジア注力型という点で，財団法人あいち産業振興機構の愛知県内企業の海外事業活動の統計（2012年）に近い。

続いて，三重県を見てみよう。図２に見られるように，三重県の企業の海外投資も東アジア（83.67％）と東南・南アジア（57.14％）に集中しており，他の地域はその比率が比較的小さく，また，東アジアと東南・南アジアなどの地域への主な進出先相手国は愛知県に近いと考えられる。三重県には愛知県における『愛知県内企業の海外事業活動』のような年次報告書がない。そのため，三重県の各地域･国に対する投資動向を見ることができない。2013年の三重県庁の統計によると，台湾へ進出している三重県の企業は８社であり，そのほとんどが製造業であり，自動車部品，電子部品，機械製品，工業製品などの生産と販売を行っている[(2)]。

総じて，両県では東南・南アジア，中国などの東アジア地域へ投資が集中している。特に，日本の自動車メーカーは東南アジアへの進出を増加させているので，自動車の原材料・部品に関わる企業が自動車メーカーに随伴して東南アジアへの進出を増加させている。そして，現地で自動車メーカーに原材料，部品などを供給することを考えている。また，台湾地域への海外投資活動に関しては，愛知県（約90社）は三重県（約10社）より進んでいる。

(2) 三重県・愛知県と台湾との貿易の関係

『平成25年における愛知県内貿易港の輸出入動向』[5)]によると，2012年の愛知県（名古屋港）の台湾に対する輸出入金額が愛知県の全輸出入金額に占める比率は，各々2.5％，5.2％に達しており，台湾は愛知県の貿易相手国として輸出では第９位，輸入では第４位に位置している。三重県の統計資料によると[6)]，2012年の三重県（四日市港）の台湾に対する輸出入金額が三重県の全輸出入金額に占める比率は，各々9.29％と0.64％に達しており，同様に第３位，第12位に位置している。前述したように，台湾は日本国全体にとっては重要な貿易・投資相手国ではなく，また，東海地方へ進出している台湾企業も中国，アメリカ，欧州などの企業より少ないのが現状である[7)]。しかし，台湾は東海地域にとってはアジア地域の中で重要な貿易･投資相手国の一つである。また，東海地方（名古屋港と四日市港）の台湾に対する輸出は日本の他の地域より活発である。

(3) 三重県・愛知県と台湾政府間の交流・提携

台湾政府は2012年７月に，愛知県の企業に対して台日産業提携誘致政策に関するセミナーを行った。しかし，愛知県と政府間の産業提携覚書（MOU）を締結していないため，台日産業提携に対する特別な施策はない。また，愛知県と台湾政府の両方の経済・貿易以外の交流でも三重県や富山県より低調である。富山県は台湾との交流を促進するため，2013年１月に台湾に「富山県駐台商務協進連絡処」を設置している。三重県は富山県のような「駐台商務協進連絡処」を設置していないが，2012年７月に三重県が台湾との産業連携覚書（MOU）を締結して以降，双方での観光，産業，学術，文化分野などの交

流が非常に盛んになっている。

三重県が台日産業連携 交流を促進する背景は次のようである。三重県特有でない，一般的ないくつかの事情としては，①日本政府がまず台湾と提携した（2011年9月に台湾と日本の双方が「台日投資協定」を締結した），②「台日産業提携架け橋プロジェクト」が日台企業双方に対してインセンティブがある，③尖閣諸島問題で日中双方の関係が悪化，④台湾－中国間の両岸経済協力枠組協定(ECFA)締結以降，台湾のアジア進出拠点としてのメリットが大きくなった，などである。県内企業側の事情は，①日本国内は少子化・高齢化が進んでいるので，国内市場の需要が拡大しにくい，②中国と生活慣習などに共通点がある台湾と提携すれば，中国市場や華僑圏市場へ進出しやすく，また，成功率も高い，③三重県の中小企業は台湾の国際経営のノウハウとグローバルなネットワークを活用できる，④三重県における中小企業は世界でリードしている技術を活用し，また，台湾企業の強いグローバルなネットワークを活用して，中国市場やASEANやその他の国・地域市場を開拓すれば，台湾と三重県企業が双方にWin-Winの関係を創造できる，⑤県内への観光客の誘致と県内商品の輸出の拡大が期待できる，などである[8]。

続いて，三重県の台日産業提携を促進する体制について述べる。第一に，三重県は既定の「海外展開戦略」（2012年7月）により，台湾との提携・交流を推進している。また，2013年5月に「三重産業振興戦略」[9]を策定し，その中の一つの戦略である「海外との提携強化に向けた取組」を行っており，さらに，2013年9月に「みえ国際展開に関する基本方針」[10]を策定した。この両政策に則って，三重県は台湾の特色や重要性なども理解した上で，台湾への国際展開に関する基本方針と政策を構想してきた。

第二に，三重県は台湾との提携を「官・官，学・学，産・産」という「三角提携」の形態で進めている。このような「三角提携」の推進形態は官・学・産に関する提携や交流を平行かつ同時に進行させており，台湾での官・学・産に関する人脈のネットワークができ上りつつある。これが三重県と台湾との提携・交流の内容の充実や範囲の拡大へ結びついている。

第三に，県がファシリテーターとして活用可能な組織と強い連携を保っていることである。特に三重県は「三重大学地域戦略センター（RASC）」，「日本貿易振興機構（ジェトロ）三重貿易情報センター」，「三重県外国人観光客促進協会」などの機関をシンクタンクとして活用し，三重県内企業に対して，台湾に関する情報の提供，台湾企業とのマッチング機会の創出，などのサポートを提供している。

三重県のこのような「三角提携」の形態は効果を発揮しており，その効果もあって2012年7月に台湾と三重県が産業MOUを締結して以降，産業，学術，観光，文化分野などの交流が非常に盛んになっている。TJPOは，日本の他の地方自治体と交流する際にも，このような「三角提携」を一つのモデルケースとして紹介することにしている。

(4) 三重県・愛知県の企業と台湾の企業との取引・提携実績

先に台湾企業との提携や取引の実績についてみる。本研究のアンケート調査によると，表2に示すように，三重県の企業では，台湾企業と取引や提携をした経験がある企業のほうが多く，全社数の58.44%を占めており，逆に台湾企業と取引や提携をした経験がない企業は，全社数の41.56%を占めている。これに対して，愛知県の企業では，台湾企業と取引や提携をした経験がある企業は，全社数の31.58%を占めており，台湾企業と取引や提携をした経験がない企業の割合は三重県より高く，全社数の68.42%を占めている。このアンケート調査に回答した大企業の割合が三重県の方が愛知県より大きいため，台湾との取引や提携をした経験の割合は，三重県の企業が愛知県の企業より高く出ているのかもしれない。

続いて，台湾企業との取引や提携の形態についてみる。表2に示すように，両県の企業は「台湾企業への製品・材料・部品・機械などの販売」，「台湾企業への生産委託」，「台湾企業への販売委託」，「台湾への技術移転」などが多くなっている。そして，「台湾企業との経営ノウハウ・サービス・人材などの交流」，「共同技術開発」，「共同出資」などの提携が少なくなっている。しかし，「その他」（三重県の企業では20.00%を占め，愛知県の企業では16.67%を占めている）を選んでいる企業も少なくないと見られる。その理由は，両県の回答企業の中に，台湾企業と提携や取引をしていない企業がまだ多く含まれるからだと考えられる。

4. 三重県と愛知県の企業の台日産業提携に対する視点

次に台湾のTJPOと産業提携覚書を締結している三重県と，締結していない愛知県の両県の企業の台日産業提携に対する視点の差異を比較してみよう。

(1) 台湾の投資環境に対する評価

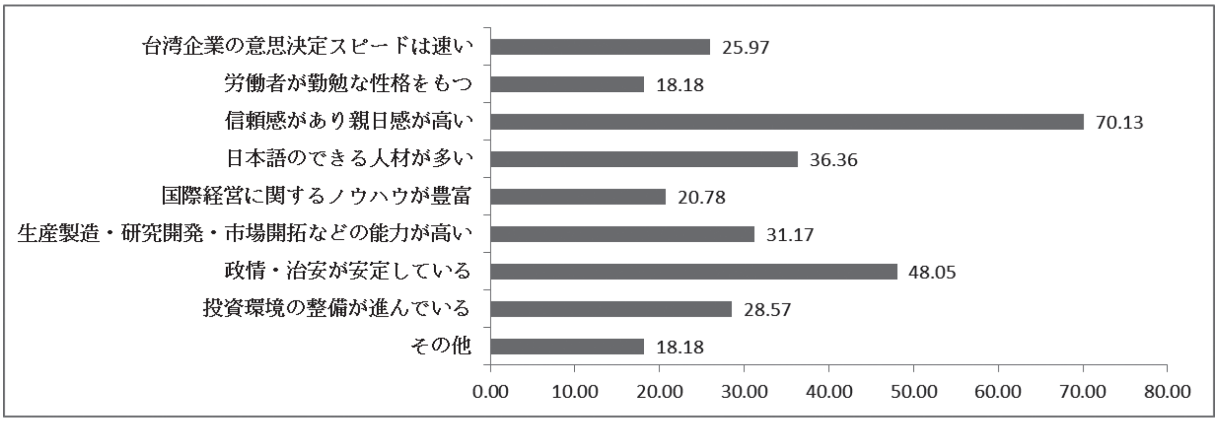
本研究のアンケート調査を比較すると，図3と図4に

表２　台湾企業との取引や提携の形態―三重県と愛知県（単位：％）

項目	三重県	愛知県
1. 取引や提携をした経験		
経験がない	41.56	68.42
経験がある	58.44	31.58
合計	100.00	100.00
2. 提携形態		
共同出資	4.44	5.56
共同技術開発	4.44	5.56
台湾への技術移転	11.11	16.67
台湾企業への製品・材料・部品・機械などの販売	57.78	66.67
台湾企業への生産委託	17.78	33.33
台湾企業への販売委託	17.78	27.78
台湾企業との経営ノウハウ・サービス・人材などの交流	8.89	5.56
その他	20.00	16.62

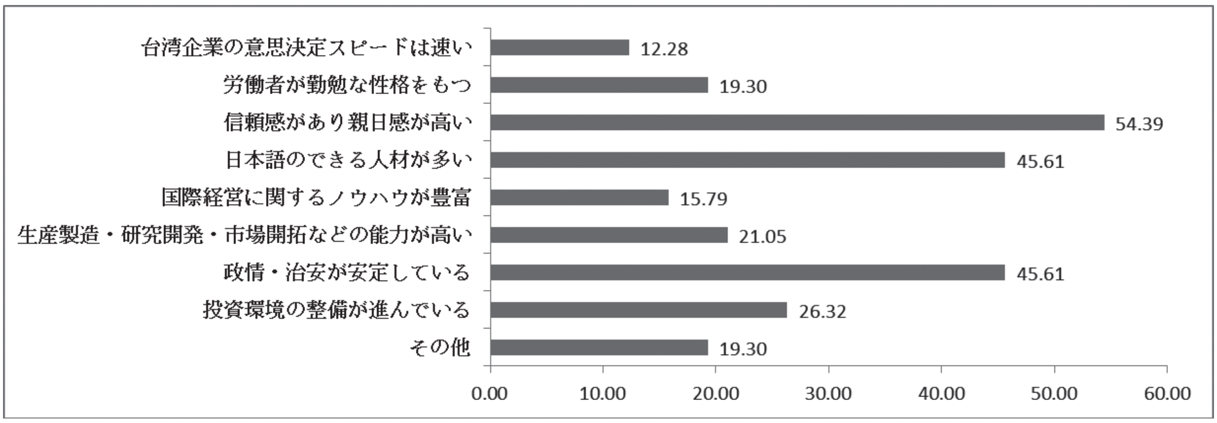
注：図１に同じ。

図３　台湾の投資環境について―三重県　（単位：％）



注：図１に同じ。

図４　台湾の投資環境について―愛知県　（単位：％）



注：図１に同じ。

示すように，三重県の企業と愛知県の企業は台湾の投資環境に対する評価が似通っている。「信頼感があり，親日感が高い」,「政情・治安が安定している」,「日本語のできる人材が多い」,「投資環境の整備がアジア地域における他の国より進んでいる」,「生産製造・研究開発・市場開拓などの能力が高い」などが強い印象を与えていると見られる。しかし,「その他」と答えた企業が約 20.0%を占めていることを見ると，台湾の投資環境に詳しくない三重県の企業と愛知県の企業はまだ多いとも考えられる。

(2) 台日産業提携が双方の企業に与えるメリット

上述した両県企業の台湾の投資環境に対する評価から見ると，台湾企業と提携した場合の日本企業の享受できるメリットが分かる。表 3 は，台日産業提携により日本企業，台湾企業の双方が享受できるメリットについて表したものであるが，日本の三重・愛知両県の企業に「生産拠点と販売ネットワークが利用できる」,「台湾企業のグローバルなネットワークを活用し，中国以外の国・地域の市場を開拓できる」,「台湾企業が中国で築き上げた政府との関係，人脈，人材を活用できる」,「言語や生活習慣が共通している台湾企業の人材を，中国ビジネスに活用できる」などのメリットが高く評価されている。しかし,「製造開発などの能力を活用してコストを抑えることができる」という観点からのメリットがやや小さいと評価されている。また,「その他」（わからない）（約 20.00%）を選んでいる企業も少なくない。

これに対して，台湾企業に与えるメリットは次のとおりである。表 3 に示すように,「日本企業から技術や経営のノウハウを獲得できる」が第 1 位である。ついで,「日本企業への製品と部品納入，または OEM，ODM 供給拡大により，生産が拡大できる」ことが高く評価されている。「日本企業のネットワークを活用し, 中国やその他の国・地域の市場を開拓できる」,「台湾企業にとって，中国における日本企業との合弁は一種の保険となる」などのメリットもあるが，前者に比べて評価は低い。「その他」（わからない）（三重県では 16.88%，愛知県では 26.32%を占めている）を選んでいる企業も少なくない。

日本の両県の企業は台湾企業より高い製造・開発技術の能力をもっているので，台湾企業のもつ製造・開発技術を活用する可能性は比較的低いとみられる。しかし，台湾企業にとっては日本企業からの技術や経営のノウハウを獲得できると高く評価されている。これに対して，両県におけるアンケート対象の大半を占める中堅・中小企業は，海外へ進出するグローバルな経験や経営資源などが不足しているため，台湾企業が中国や海外で構築している生産拠点，販売ネットワーク，人脈，並びに台湾企業の豊かな国際経営経験を活用できるため，台日相互にメリットを補える点が多いというのが表 3 から得られる結論である。

(3) 三重県と愛知県の企業の経営課題と経営戦略

表 4 に見られるように，三重県の企業の経営課題は愛知県の企業の経営課題と同じで,「国内市場需要の減少」が一番深刻な経営課題であり，そして,「円安で材料･部品コストが高騰」,「国内外市場での競争激化」,「外国語のできる人材が少ない」などの深刻な課題がある。「川下産業の海外進出の拡大」,「国内労働者の確保が困難」が

表 3　台日産業提携が双方の企業に与えるメリット―三重県と愛知県（単位 :%）

日本企業に与えるメリット			台湾企業に与えるメリット		
項　目	三重県	愛知県	項　目	三重県	愛知県
生産拠点と販売ネットワークが利用できる	54.55	47.37	日本企業から技術や経営のノウハウを獲得できる	58.44	47.37
台湾企業のグローバルなネットワークを活用し，中国以外の国・地域の市場を開拓できる	41.56	22.81	日本企業への製品と部品納入，または OEM，ODM 供給拡大により，生産が拡大できる	40.26	43.86
台湾企業が中国で築き上げた政府との関係，人脈，人材を活用できる	32.47	33.33	台湾企業にとって，中国における日本企業との合弁は一種の保険となる	12.99	17.79
言語や生活習慣が共通している台湾企業の人材を，中国ビジネスに活用できる	27.27	35.09	日本企業のネットワークを活用し，中国やその他の国・地域の市場を開拓できる	16.88	24.56
製造開発などの能力を活用してコストを抑えることができる	22.08	19.30	その他	16.88	26.32
その他	18.18	21.05			

注：図 1 に同じ。

表４　三重県と愛知県の企業の経営課題と経営戦略（単位：％）

経営課題	三重県	愛知県	経営戦略	三重県	愛知県
円高で輸出が減少	7.79	1.75	海外へ進出し，生産コストを引き下げる	15.58	17.54
国内市場需要の減少	59.74	66.67	商品多様化・事業の多角化で，経営リスクを分散する	28.57	59.65
外国語のできる人材が少ない	31.17	15.70	海外市場を開拓する	51.95	22.81
国内サプライチェーンの崩壊	3.90	1.75	川下産業の需要に対応し，海外へ進出する	10.39	1.75
川下産業の海外進出の拡大	11.69	14.04	職業訓練を強化し，生産効率を高める	15.58	35.09
国内外市場での競争激化	41.56	36.84	市場需要に柔軟かつ迅速に対応する	51.95	64.91
国内労働者の確保が困難	10.39	17.54	より安い材料・部品を海外から調達する	19.48	22.81
円安で材料・部品コストが高騰	20.78	42.11	その他	16.88	3.51
その他	11.68	3.51			

注：図１に同じ。

これに次ぐ課題であり，重要度は小さいが,「円高で輸出が減少」,「国内サプライチェーンの崩壊」などの課題も存在する。

詳細にみると，アンケート対象となった三重県の企業は，愛知県の企業より国際化の進展が遅れているため，三重県では海外進出に必要な人材の不足が愛知県より目立っている。逆に愛知県の企業は，海外の子会社や海外各国から部品・材料などを調達し，国外市場に対する依存度が高くなっており,「円安で材料・部品コストが高騰」の課題が三重県の企業より深刻である。

上述した経営課題に対して,三重･愛知両県の企業はどのような対応策に取り組んでいるか。両県の企業は「市場需要に柔軟かつ迅速に対応する」,「商品多様化・事業の多角化で，経営リスクを分散する」などの対応策が重要という同じ視点を持っている。しかし，長期的に販路が内需に傾斜しており，海外市場への開拓や進出が遅れている三重県の企業は，近年国内市場の縮小が続いていることもあり，また，三重県からの海外展開戦略に関するサポートが得られるため,「海外市場を開拓する」という経営戦略を採用する企業が比較的多くなっている。そのため，表４に示したように,「海外市場を開拓する」を最優先しながら,「より安い材料･部品を海外から調達する」,「海外へ進出し，生産コストを引き下げる」，などの対応策に取り組んでいる企業が多くなっている。このようなことが，三重県が台日産業提携を促進する背景となっている。これに対して，愛知県の企業では,「市場需要による柔軟かつ迅速に対応する」,「商品多様化・事業の多角化」,「職業訓練を強化し，生産効率を高める」などの経営戦略が「海外市場を開拓する」と「海外へ進出し，生産コストを引き下げる」などの対応策より重要性が高いと考えられる。

(4) 政府間の台日産業提携政策の影響

前述した分析によると，両県の産業にとっては「海外市場を開拓する」戦略についての重要度が違っている。このことが，台湾と日本政府間の台日産業提携政策が両県の産業に対して与えるインセンティブの差となって現れるのであろうか。「台日産業提携架け橋プロジェクト」の優遇政策は両県企業に与えるメリットの違いを作り出しているのか。この点を表５で見ることにする。三重県企業では「影響度が低い」(53.25％) が「影響度が高い」(42.86％) を上回っており,「影響がない」がわずか 3.90％となっている。愛知県の企業でも三重県の企業と評価がほぼ一致しており,「影響度が低い」(49.12％) と「影響がない」(14.04％) とが合計で約 63.0％となり,「影響度が高い」(36.84％) を大きく上回っている。それでも筆者は「影響度が高い」と評価した企業も三重県では 42.86％, 愛知県では 36.84％あり,「台日産業提携架け橋プロジェクト」の効果もかなりあると評価したい。

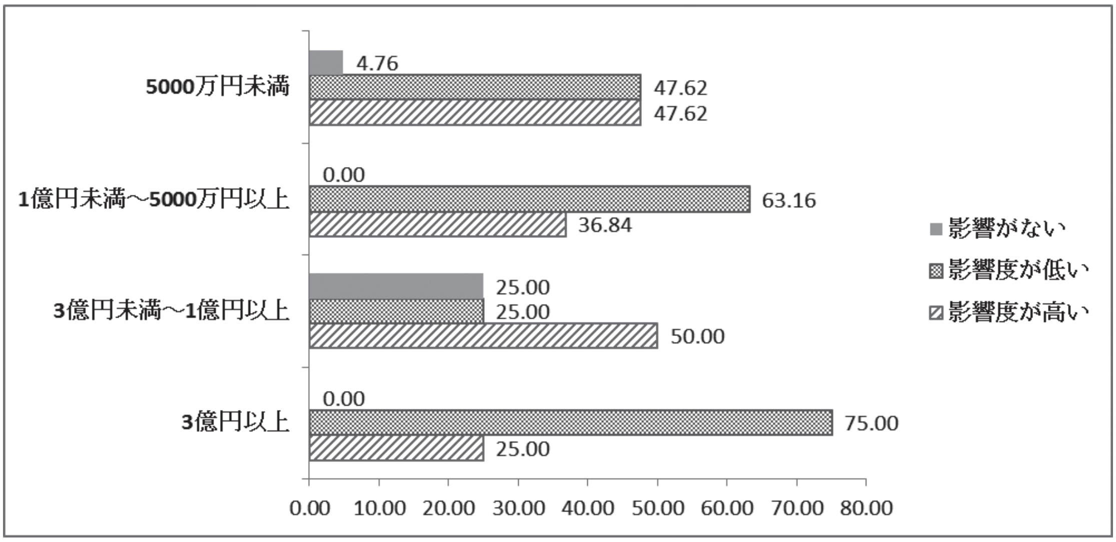
続いて，日本の地方自治体の台日産業提携政策の企業に対する影響度についてみる。2012 年７月以降，三重県は県内の企業と台湾企業との提携･協力を促進している。これは，三重県の企業の台湾への投資動向にどの程度の影響を及ぼすのか。表５に示すように，三重県の企業は「影響が低い」が「影響度が高い」より高いと考えているが，その差があまり開いていない。しかし，図５による

表５　台湾政府の台日産業提携政策の企業に対する影響度―三重県と愛知県（単位：％）

「台日産業提携架け橋プロジェクト」の影響			自治体の促進の影響		
影響度	三重県	愛知県	影響度	三重県	愛知県
影響がない	3.90	14.04	影響がない	3.90	8.77
影響度が低い	53.25	49.12	影響度が低い	54.55	61.40
影響度が高い	42.86	36.84	影響度が高い	41.56	29.82
合計	100.00	100.00	合計	100.00	100.00

注：表１に同じ。

図５　三重県の日台産業提携政策が三重県の企業の対台湾投資に与える影響（単位：％）



注：図１に同じ。

と，資本金３億円未満～１億円以上の大企業は「影響が低い」より「影響度が高い」という評価の割合がかなり高くなっている。このような結果から見ると，アンケート結果の数字は，個々に異なる企業経営判断が集積されたものになっており，表面的な数字の分析のみでは，判断を誤ることになることを示している。

次に，自治体の促進政策の影響について，三重県と愛知県のアンケート調査を比べてみると，表５に見られるように，愛知県の企業の「影響度が低い」（61.40％）という評価が三重県のそれ（54.55％）より大きくなっている。逆に愛知県の企業の「影響度が高い」（29.82％）という評価が三重県の結果（41.56％）より低い。その原因は，愛知県の企業は三重県の企業より国際化が進んでいることにある。また，海外へ進出する際には，ほとんど自社独自の判断で事業を進めており，他の機関からのサポートに頼らないことが多いからであろう。そのため，地方自治体の台日産業提携の誘致政策の影響が低いと評価されたと考えられる。本研究による別のアンケート調査の結果によると，愛知県の企業は海外へ進出するとき，「ほとんど自社独自で事業を進展」と答えた企業数が全体の78.57％を占めており，これに対して，ジェトロ（14.29％）や地方自治体（0.00％），国内銀行（28.57％）などの機関からのサポートを受けた割合が比較的低くなっている。

以上の様な結果ではあるが，自治体の促進政策が三重県の企業からは41.56％，愛知県では，やや少ないが29.82％が「影響度が高い」と評価されている。独自に海外戦略を判断できる企業が多いことは認めるにしても，この数字を見る限り，自治体の促進政策も情報不足の企業にとっては，かなり貴重なものであることが分かる。したがって，両方の行政機関が産業連携政策や海外投資政策を促進すれば，一部分の企業に影響を及ぼすのではないだろうか。三重県と台湾 TJPO は産業 MOU を締結しており，三重県の企業は愛知県の企業より国際化が遅れているため，愛知県の企業より台日産業提携の誘致政策に対する評価が高くなっている。

(5) 三重県と愛知県の企業の台湾企業と提携する意向

①台湾企業と提携する意向

三重県の企業は，台湾企業とどの程度提携したいと考えているのか。三重県のアンケート調査によると,「チャンスがあれば，提携したい」が第1位であり，全社数の42.86%を占めており，そして,「提携する予定がない」が第2位であり，全社数の31.17%を占めている。「もう提携している」が第3位であり，全社数の20.78%を占めている。最後は「提携を計画している」であり，全社数の5.19%を占めている。また，企業の従業員数別によると，図6に見られるように，中堅・中小企業はチャンスがあれば，台湾企業と提携したいという意向が大企業より強い。

続いて，愛知県と三重県を比較してみてみよう。愛知県は「提携する予定がない」(66.67%）が「もう提携している」(10.52%）と「チャンスがあれば，提携したい」(22.81%）よりかなり高い。愛知県の企業は三重県の企業より国際化が進んでいるので，台湾企業と提携する意向が三重県の企業より低いと考えられる。三重県の企業でも，図6で見たとおり，中堅・中小企業は台湾企業と提携する意向が大企業より強くなっている。その原因は，三重県内の中小企業は上述した深刻な経営課題があるため，従来の内需市場志向の転換を図る企業が多く，そのため，海外へ進出したいという意向が強く，チャンスがあれば，台湾企業と提携したい企業が半分近くに達するのである。

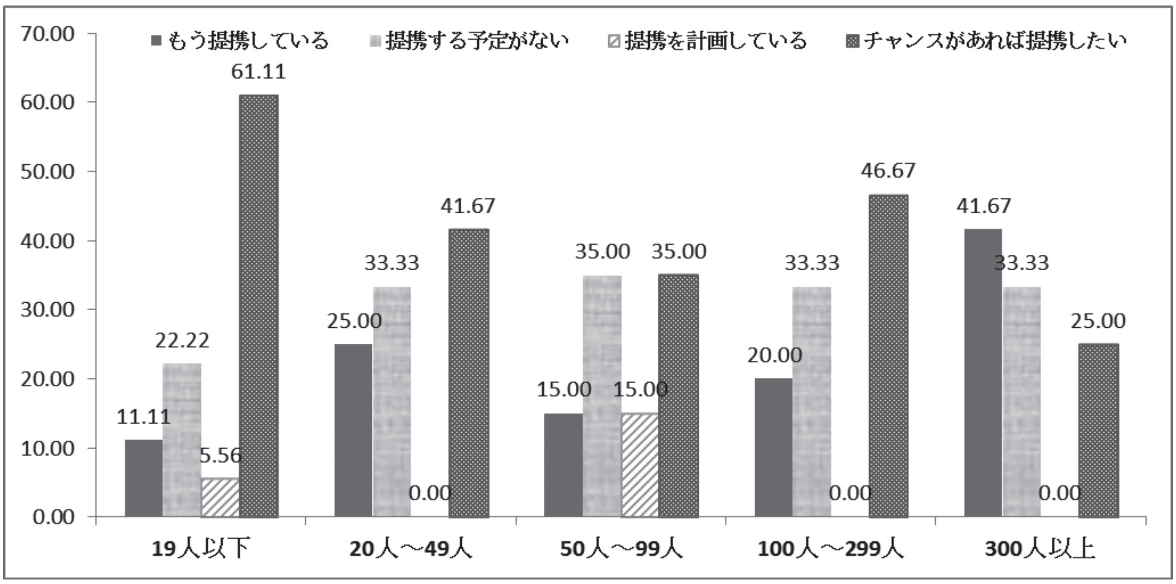
②台湾企業と提携しやすい企業規模

三重県の企業の考える提携しやすい台湾企業の企業規模は，どの程度であろうか。本研究調査の結果によると，「中小企業」が一番提携しやすい企業規模であり，全社数の81.82%がそう望んでいる。「大企業」が第2位であり，全社数の27.27%を占めている。「小規模企業」(14.29%）は提携希望が少ないと考えられる。愛知県の企業の場合も三重県の企業と同じで,「中小企業」が一番提携しやすい企業規模であり，全社数の77.19%を占めている。「大企業」が第2位であり，全社数の29.82%を占めており，「小規模企業」(8.77%）に対する提携希望は少ないと考えられている。今回のアンケート調査では，両県の対象企業の規模は中小企業が七割以上を占めているので，台湾企業と提携しやすい企業規模は「中小企業」が中心となっている。

③台湾企業と提携しやすい業種

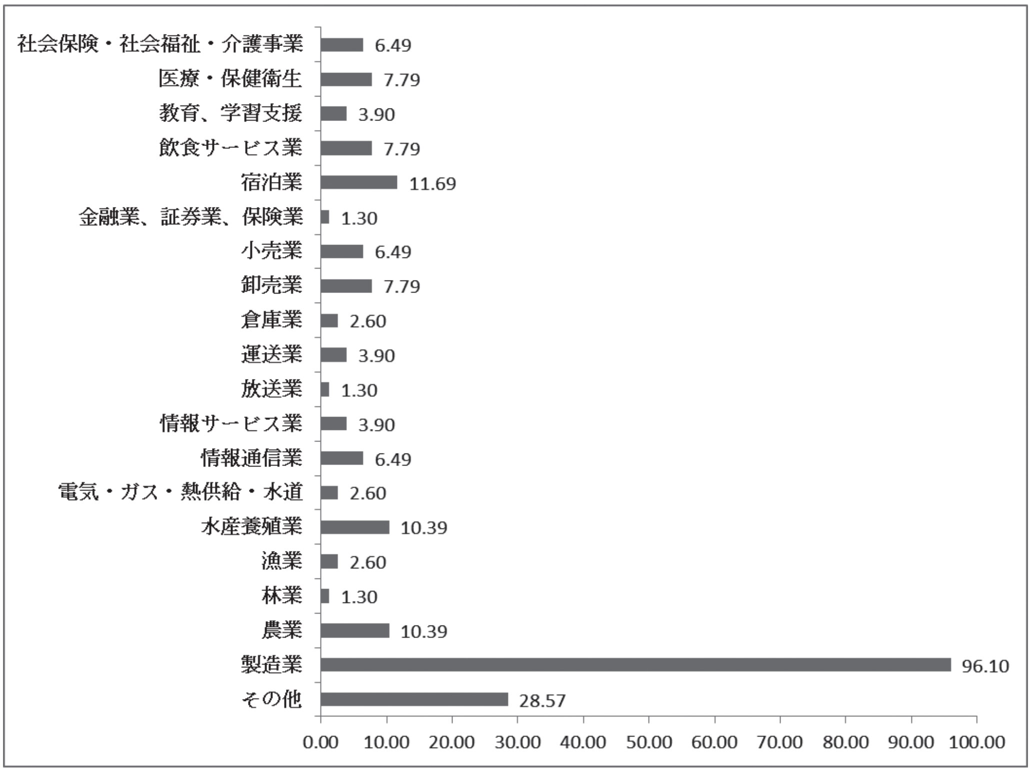
図7と図8に示すように，両県の企業は製造業が一番提携しやすい業種と考えている。その原因は，調査対象産業に製造業が多いためである。ところが，三重県では環境，立地，気候，文化などの違いもあって，農業，水産養殖業，観光業などの産業が，愛知県より発達している。このため，水産養殖業，宿泊業，医療・保健衛生業などの業種でも，愛知県の企業より，提携しやすい業種と認められている。これに対して，愛知県は製造業と商業が発達しているので，卸売業，小売業，飲食サービス業，社会保険・社会福祉・介護事業が提携しやすい産業となっている。

図6　三重県の企業が台湾企業と提携する意向　(単位：%)



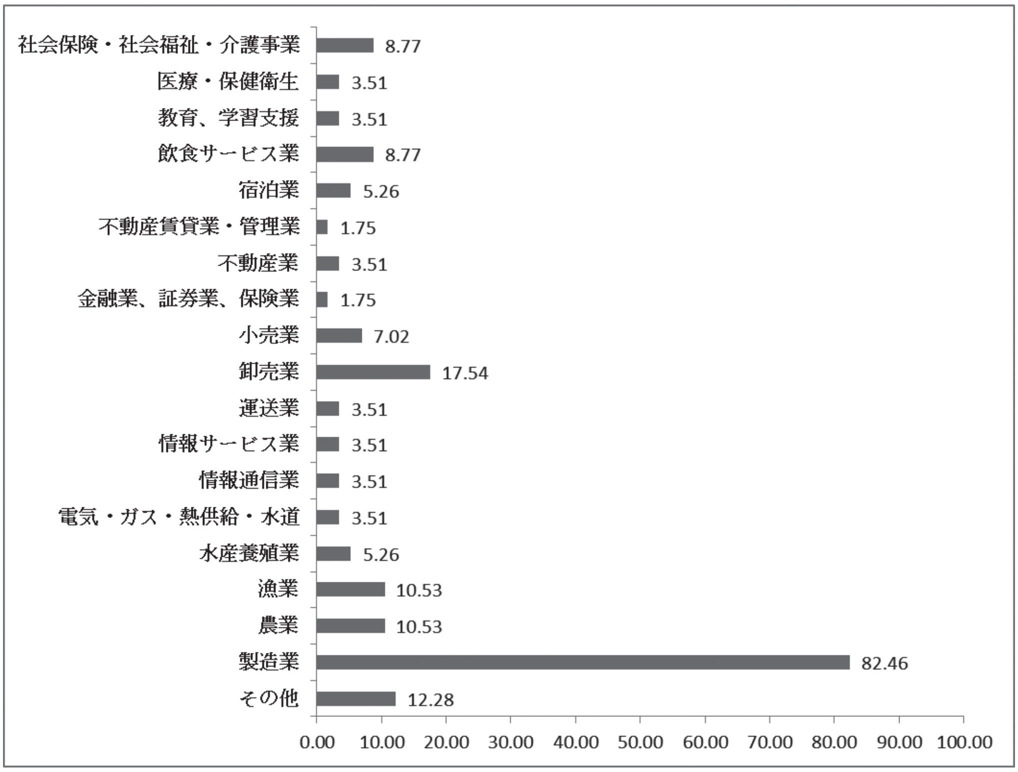
注：図1に同じ。

図７　台湾企業と連携しやすい業種―三重県（単位：％）



注：図１に同じ。

図８　台湾企業と連携しやすい業種―愛知県　（単位：％）



注：図１に同じ。

④台湾企業と提携しやすい形態

台湾企業と提携しやすい形態については，表6に示すように，愛知県の企業と三重県の企業の考え方はほぼ同じであり，「マーケティングの提携」と「生産製造の提携」が一番提携しやすい形態としている。

⑤台湾企業と提携して開拓したい地域

台湾企業と提携して，どの国・地域の市場開拓を行いたいと思うかを聞いた，三重県と愛知県のアンケート結果を比較してみよう。表6に示すように，両県は台湾企業と提携して新たに市場開拓を行いたい国・地域が同じ傾向にあり，東アジアと東南・南アジアなどの地域の市場開拓を中心にしている。逆に，既に見てきたように，北米，欧州，中南米などの地域の市場開拓の意向は比較的低い。日本企業にとって，台湾企業と提携すれば，「台湾企業が中国で築き上げた政府との関係，人脈，人材を活用できる」，「言語や生活習慣が共通している台湾企業の人材を，中国ビジネスに活用できる」などのメリットがあるので，台湾企業と提携して，市場開拓したい国・地域が中国に集中している。本研究のアンケート調査によると，開拓したい市場は，東アジア地域では，中国が第1位であり，続いて台湾と韓国である。「東南･南アジア地域」では，インドネシア，タイ，ベトナム，インドなどを選んだ企業も多く見られる。

しかし，両県の企業には台湾企業と取引した経験がない企業が多く，台湾の経済事情にも詳しくないので，台湾企業と提携する予定がない企業も少なくない。そのため，表6にあるように，台湾企業と提携する形態，提携して開拓したい地域を「その他」（わからない）と答えた企業がかなり多い結果となったと思われる。

⑥台湾企業と提携した場合の必要資金の調達源

三重県の企業と愛知県の企業は，台湾企業と提携した場合に必要な資金の調達源をどう考えているのか。図9と図10によると，両県企業の考え方はほぼ似ており，「自己資金」が必要資金の主な調達源である。次いで，「台湾以外での銀行借入・社債発行」が多い（特に三重県の企業）。逆に，「台湾市場での資金調達」が少ない。これにより判断すると，両県の企業は台湾政府や支援機関からの資金調達を多く望んでいないと思われる。この背景には，台湾の金融市場の小ささや，台湾ドル以外の取引通貨の調達が困難といった台湾側の事情と，両県ともアンケートに回答した企業の大半が中小企業であり，日本の銀行への依存が強いことや，高いリスクを伴う投資には自己資金で応じるという経営者の考え方があると考えられる。

（6）台日産業提携に対する発展と課題

次に，両県の企業が台湾企業と提携するときに，発生する課題，必要なサポート，サポートしてもらいたい機関を考察し，その後に，台日産業提携に対するあり方を考えてみたい。

①台湾企業と連携する時に発生する課題

三重県の企業と愛知県の企業では，台湾企業と提携する時，どのような課題があるのであろうか。図11と図12に示すように，両県の企業にとって，「パートナー探しが困難」，「海外進出に必要な人材の不足」，「言葉に対応する問題」，「投資環境が不明」などが重要な課題である。逆に「資金調達の問題」は深刻な課題ではないとしている。この理由は，上述したように，両県の企業は自己資金と台湾以外（主として日本）の銀行借入・社債発行で賄えると考えているからである。また，両県のアンケート対象企業は中小企業が主体なので，むしろ，海外へ進出する時，パートナー探し，外国語で対応できる人材，進出相手国の投資情報などが課題と考えられている。そのため，台湾と日本双方の台日産業提携政策は，このような問題に焦点を絞る必要があるように思われる。

②台湾企業と連携する時に必要なサポート

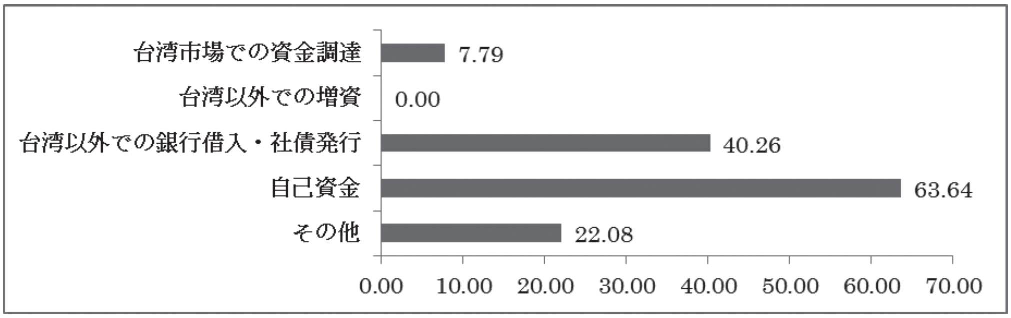
三重県の企業は台湾企業と提携する時，どのようなサポートが必要と考えているか。表7に示すように，「台

表6　台湾企業と提携して市場開拓を行いたい国・地域と提携しやすい形態（単位：％）

市場開拓したい国・地域	三重県	愛知県	連携しやすい形態	三重県	愛知県
東アジア	61.04	61.40	マーケティングの提携	36.84	46.75
東南・南アジア	46.75	49.12	生産製造の提携	31.58	41.56
北米	9.09	14.04	事業経営の提携	15.79	22.08
中南米	3.90	5.26	研究開発・デザインの提携	14.04	11.69
欧州	3.90	7.02	その他	47.37	20.78
アフリカ	0.00	0.00			
その他	28.57	28.07			

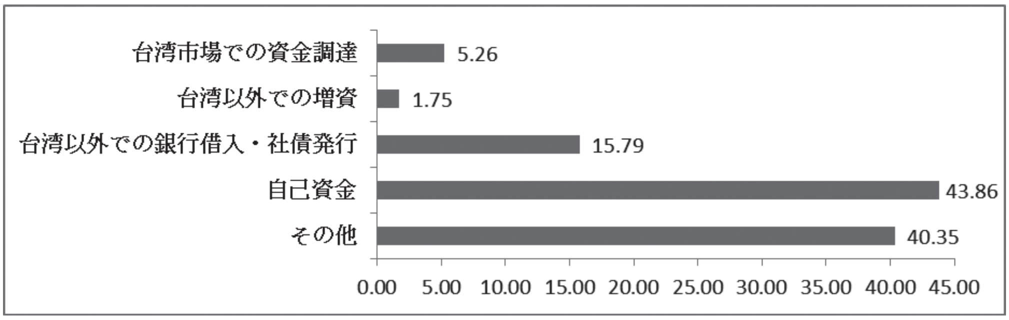
注：図1に同じ。

図９　台湾企業と連携した場合に必要な資金の調達源―三重県（単位：%）



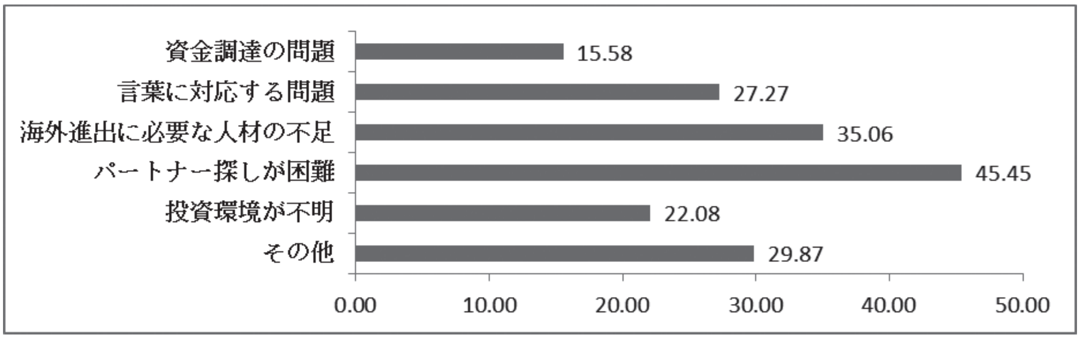
注：図１に同じ。

図 10　台湾企業と連携した場合に必要な資金の調達源―愛知県（単位：%）



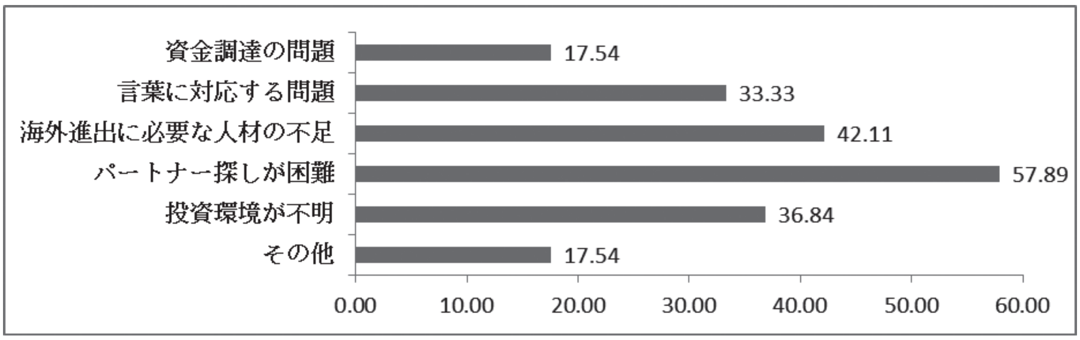
注：図１に同じ。

図 11　台湾企業と連携する時に発生する課題―三重県（単位：%）



注：図１に同じ。

図 12　台湾企業と連携する時に発生する課題―愛知県（単位：%）



注：図１に同じ。

湾における提携できる可能性が高いパートナー情報の提供」が第1位であり，全社数の48.05%を占めている。そして，「日本政府や地方自治体の海外投資奨励と支援政策の提供」が38.96%と続く。また，「台湾における提携できる可能性が高い産業情報の提供」，「台湾へ進出する時，言葉に対応できる人材の紹介」，「台湾へ進出する必要な資金調達の提供」，「台湾企業における投資環境情報の提供」などが20.0%台のウエイトを占めている。

愛知県の企業の場合を三重県の企業のアンケート調査結果を比較してみると，資金調達のニーズが低い以外は，同じような傾向にある。ここでは，「台湾における提携できる可能性が高いパートナー情報の提供」が61.40%と圧倒的な比重で，第1位となっている。しかし，愛知県の企業では「日本政府や地方自治体の海外投資奨励と支援政策の提供」のウエイトが小さく，投資環境，産業情報，人材など，企業独自で判断できる情報を欲している。おそらく，これは愛知県の企業は三重県に比べ国際的な取引の経験が多いためと考えられる。これに対し，三重県の企業の場合，海外へ進出した経験や資源が不足しているため，日本政府や地方自治体からの誘致政策や支援政策に期待している度合が大きい。このため，三重県では2012年の「海外展開戦略」，2013年の「みえ国際展開に関する基本方針」[11]など，企業の国際化を促進する政策や措置に取り組んでおり，また，産業提携覚書と提携できる対象国を増やそうとしている。

③サポートしてもらいたい機関

三重県の企業と愛知県の企業を比較するとほぼ同じ傾向の回答であるが，表7に見られるように，愛知県の企業は三重県の企業より国際化が進んでいるので，地方自治体からのサポート依存度は三重県より低く，これに対して，国内の銀行や中小企業支援機関への依存度が高くなっている。逆に，三重県の企業はジェトロ，地方自治体などからの支援を求めるウエイトが高くなっている。

日本においては，地方銀行が企業の海外投資の相談に応じるケースが多く，ジェトロや中小企業支援機関も充実しているので，三重県が行っているように，地方自治体がこれらの機関とタイアップし，台湾政府の受け皿と密接に接触しながら，サポートしていく体制を組むことが望ましいと考えられる。

④台日産業提携の発展の見込み

三重県の企業は，台日産業提携の発展についてどう思っているのか。図13によると，「台湾市場は大きくないので，台湾市場からスタートし，台湾を拠点にその他の国を開拓していくべきであろう」が第1位であり，「両国産業に対してインセンティブがあるので発展していくであろう」が第2位であり，「台湾政府との提携･交流を積極的に促進すれば，両国産業提携・交流は発展する」が第3位である。これに対して，「両国の相互貿易規模が大きくないので，日台産業提携の発展が限られる」と「その他（わからない）」と答えた企業は少なかった。

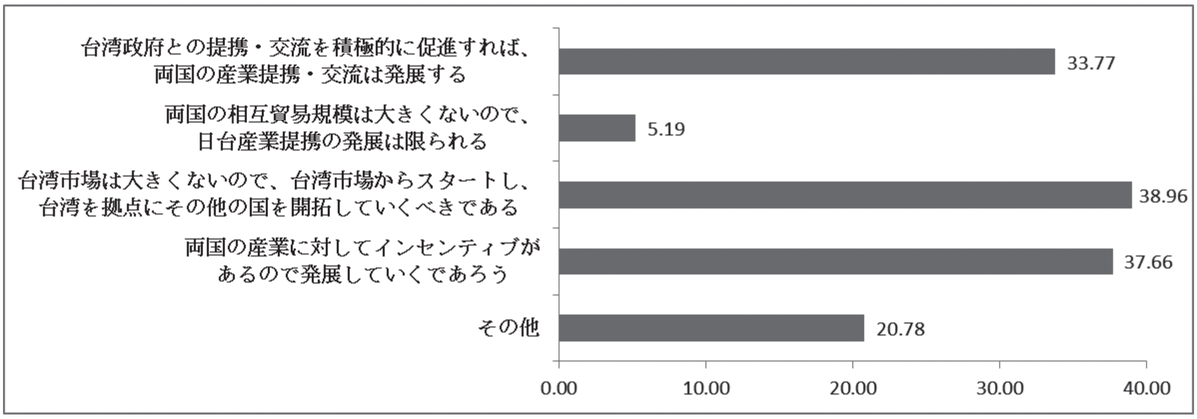
図14の愛知県の企業の回答では，愛知県と台湾との交流がまだ進んでいないこともあり，「台湾政府との提携・交流を積極的に促進すれば，両国産業提携・交流は発展していく」という意見が強かった。これに，「台湾市場は大きくないので，台湾市場からスタートし，台湾を拠点にその他の国を開拓していくべきであろう」が第2位と

表7　台湾企業と提携する時，必要なサポートと支援機関―愛知県と三重県　（単位：%）

必要なサポート			サポートしてもらいたい機関		
項　目	三重県	愛知県	項　目	三重県	愛知県
日本政府や地方自治体の海外投資奨励と支援政策の提供	38.96	28.07	自社で事業を進行するので，支援機関からの支援は必要ない	6.49	8.77
台湾企業における投資環境情報の提供	20.78	31.58	ジェトロから海外情報の取得	37.66	31.58
台湾における提携できる可能性が高い産業情報の提供	28.57	36.84	地方治自体における海外投資担当機関の協力	33.77	28.07
台湾における提携できる可能性が高いパートナー情報の提供	48.05	61.40	国内銀行からの資金や海外情報の提供	27.27	35.09
台湾へ進出する時，言葉に対応できる人材の紹介	23.38	35.09	中小企業支援機関から資金，人材や情報の提供	32.47	43.86
台湾へ進出する必要な資金調達の提供	22.81	16.88	台湾の当地政府機関からの支援	32.47	33.33
その他	23.38	19.30	日本における台湾政府代表機関からの支援	14.29	22.81
			その他	24.68	21.05

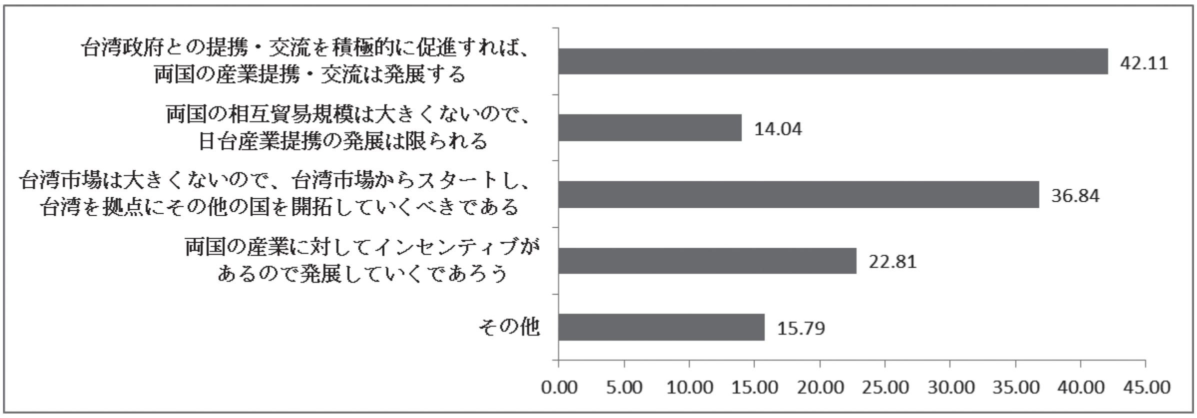
注：図1に同じ。

図 13　台湾と日本の産業提携・交流の発展見込み―三重県（単位：%）



注：図 1 に同じ。

図 14　台湾と日本の産業提携・交流の発展見込み―愛知県（単位：%）



注：図 1 に同じ。

して続き,「両国産業に対してインセンティブがあるので発展していくであろう」が第 3 位であった。「両国の相互貿易規模が大きくないので，日台産業提携の発展が限られる」と「その他（わからない）」と答えた企業の比重は小さかった。

以上を要約すると，両県の企業は台日産業提携が双方産業にとってインセンティブがあるので，双方政府が積極的に促進すれば，両国の産業提携・交流が盛んになっていくであろうと考えられ，また，戦略的には，台湾の市場は大きくないので，台湾市場からスタートし，台湾を拠点として他の国・地域を開拓していくべきことを強調している。

5. 三重県と愛知県の企業の台湾への進出動向と事例

次に積極的に台湾企業と提携・交流している企業事例を取り上げる。これらの事例により，上述したアンケート調査にもとづき分析した両県企業の台日産業提携に対する視点を再確認でき，また，両県産業の特色の違いを認識することができると考える。

(1) 三重県の事例

上述の分析によると，三重県の中小企業は海外へ進出する意向が強く，また，台湾企業と提携する意向もあると見られる。しかし，中小企業は大企業より経営資源が乏しいので，海外へ進出する時，政府機関からのサポートに大きく期待している。そのため，三重県は 2012 年 7 月に台湾と産業 MOU を締結して以降，三重大学地域戦略センターや日本貿易振興機構（ジェトロ）と提携して，県内中小企業に対して，台湾企業とのマッチング機会の創出及びフォローアップに係る支援やサポートを与える体制を整えた。また，県内で競争力の比較的高い機能性食品と食品加工機械を，台日産業提携を促進する業種に選定した。そして，県内の主な機能性食品と食品加工機械に関連する中小企業と一緒に積極的に台湾を訪問し，

台湾企業とのビジネス交流会を行い，提携できるパートナーを探してきた。

2012年から参加した企業は，辻製油株式会社，株式会社スエヒロEPM，伊藤工機株式会社，日本電熱株式会社，株式会社医用工学研究所，A化学株式会社などである。その中で，2013年に株式会社医用工学研究所，2014年にA化学株式会社が台湾企業と提携し，また，その他の会社は現在パートナーを選定中である。筆者は，台湾と三重県の双方の企業が提携・交流している現場に立ち会い，同時に，参加した三重県の企業に対してヒアリングを実施した(3)。そうして，三重県の企業から，望ましい台湾企業の業務内容や提携形態，ターゲット市場などの情報を得ることができた。次に積極的に台湾企業と提携・交流している企業の事例を上げてみよう。なお，企業経営の機密に係る部分があるため，提携内容や企業名などの表示について限定があることを予め断っておきたい。

①株式会社医用工学研究所

株式会社医用工学研究所（以下，医用工学研究所）は2004年12月に設立され,医療用データウェアハウス（病院の経営支援，診療支援，研究支援，業務効率の改善）の立案・構築などを行っている会社である12)。医用工学研究所は台湾，中国，東南アジアなどの市場を開拓したいと考えている。また，三重県の台日産業提携政策に応じて，日本語と中国語の両方ができ，台湾，中国，東南アジアなど市場にも詳しく，人脈が広い和権国際企業有限会社の徐世南氏と資本提携をし，台北で「台北科立塔有限公司」を設立した。そして，医用工学研究所は自社が持っている技術を活用し，台湾企業が持つ強いグローバルなネットワークと市場販売力を組み合わせるため，台北科立塔有限公司に市場開拓と市場販売などの事業を担当させた。ターゲット市場としては，現時点では，台湾，中国，東南アジアなどの市場を考えているが，将来は,東欧の新興市場をも開拓していく計画を持っている。

② A化学株式会社

三重県にあるA化学株式会社（以下，A社）(4)は，日本国内の少子・高齢化で，国内市場が伸び悩みとなる公算が大きいため，生産コストを削減し，また，売上規模を維持するため，海外市場へ進出することを計画した。その目的で,A社は5年前から台湾市場を調査してきた。また,長期的に三重大学から技術サポートを受けている。そして，三重県と三重大学地域戦略センターの台日産業提携政策に応じて，台湾へ進出する意向を固めた。加えて，東日本大震災により東北沿海が汚染され，東北沿海から海藻を仕入れることが困難になるという事態が発生した。そのため，台湾の西にある澎湖沿海から海藻を調達しようと考えた。

A社は2013年から積極的に台湾のパートナーを探し始めた。提携生産商品は，海藻で開発した健康食品であり，台湾で生産するための進出を計画している。生産に必要な原料は，台湾の現地で仕入れる予定である。そこで，A社は三重大学と交流している台湾海洋大学に共同研究を持ちかけ，現在，海藻を健康食品に組み込むための研究を行っている。提携形態と資金調達についてみると，現時点で，A社は余分な資金を提供できず，自社開発の技術を台湾のパートナーに移転し，委託生産を依頼する形の提携形態を考えている。しかし，A社は台湾での生産の大規模化を望んでおらず，自社と同じ企業規模の中小企業クラスのパートナーを探した。こうして，2014年に台湾の桃園にある食品会社と提携し，生産が始まったが，その一方で，他のパートナー探しも継続している。台湾で生産した商品は，台湾から日本へ逆輸入しており，また，台湾の現地での販売も計画している。長期的に，中国，東南アジアなどのアジア市場もターゲットとなると思われる。

③辻製油株式会社と伊藤工機株式会社

辻製油株式会社（以下，辻製油）と伊藤工機株式会社（以下，伊藤工機）の場合は，A社とその提携目的が似通っている。この両社は水準が高い，新しい技術を持っているが，市場拡大と生産コストの低減などの目的を達成するために，台湾企業との提携を考えている。生産委託の提携形態を中心に，ターゲット市場は日本への逆輸入や日本以外の市場への拡大が目標である。例えば，辻製油はレシチン，機能性素材，天然香料などの健康食品と化粧品で使う新しい技術を，伊藤工機は爆枠装置，防爆型IH加熱反応缶(5)，大型IH調理機などの高い生産技術を台湾企業に技術移転したいと考えている。

（2）愛知県の事例

筆者は2012年7月，2013年11月と2014年7月に愛知県における中小企業に対して詳細なインタビュー調査を行ってきた。ここでは，三つの会社の台日産業提携の事例を挙げる。

①株式会社羽根田商会

株式会社羽根田商会（以下，羽根田商会）は1951年に名古屋で設立され，タイ，中国，シンガポール，台湾などに進出している。羽根田商会の主な事業内容は，外国製及び国産の生産財（機械・工具等）の輸入及び販売であり，自動車，工作機械，航空機，建設機械，ロボット，半導体製造措置などの分野の業者が主な顧客であり，特に自動車メーカーを主な顧客としている。それゆえに，羽根田商会の売上高はトヨタ自動車の生産量とほ

ぼ同じ傾向を示している。例えば，2007 年にトヨタ自動車の国内生産台数はピークとなり，422 万台に達していた。しかし，2008 年のリーマンショックと 2011 年の東日本大震災の影響を受けて，2011 年に 276 万台に大幅に減少した。これに連動して，羽根田商会の売上高も 2007 年の 80 億円～ 90 億円から 2012 年の 60 億円に大幅に減少した [13)]。その後，トヨタ自動車の国内生産台数は横ばいになると予想された。そのため，羽根田商会は事業の継続と売上げを確保するため，自動車の部品，半導体製造装置，医療・介護機器製造などの事業分野に拡大する経営戦略を選択した。こうして，羽根田商会はロボットの生産技術を持っている株式会社テムザック（以下，テムザック）[(7] と提携し，新たに医療・介護機器の事業分野に踏み出し，2011 年 10 月に台湾で「Tmsuk Formosa（中国語：天目時科股份有限公司）を設立した [14)]。

羽根田商会は台湾への進出に際し，以下のいくつかの点を考慮した。

A. 台湾の投資環境：台湾では日本語ができる人材が多く，製造技術もかなり高い。また，生産コストが日本より低く，台湾と中国は言語や生活習慣に共通点があるので，中国市場への進出に対してメリットがある。また，台湾は日本人にとって信頼感があり，日本企業は安心して進出することができるなどの利点を持っている。

B. 投資形態：羽根田商会はシンガポールに設立した持株会社の資金を台湾へ提供し，生産と技術開発はテムザックに任せている。テムザックは生産を委託する台湾の機械メーカーに数名の技術者を派遣して生産技術の指導を行っている。現在では，生産を委託している台湾メーカーの製品の品質も期待どおりに向上してきた。

C. 生産品目：新型救命支援ロボット（プレホスピタルケアロボット :Pre-Hospital Care Robot），ユニバーサルビークル（Universal Vehicle:「ROOEM」），歯科患者ロボット（DENTAROID）などの医療･看護機器である。

D. ターゲット市場：台湾で生産された医療･看護機器は，主として欧米市場へ輸出することが予定された。

その後，事業提携の内容に変化があった。即ち，羽根田商会にとっては機械・工具などの販売が得意な事業分野であり，医療・介護機器の生産技術は得意な事業分野ではない。そのため，2013 年に羽根田商会が Tmsuk Formosa（天目時科株式会社）の所有権をパートナーのテムザックに移転し，代わりに，テムザックの株式の一部分（全株式の約 5 ～ 10.0%）を持つことになった。将来，天目時科股份有限公司の医療・介護機器を本格的に商品化すれば，羽根田商会は販売への協力が可能となる。

②株式会社オプコと助川鉄工株式会社

株式会社オプコ（以下，オプコ）と助川鉄工株式会社（以下，助川鉄工）は愛知県にある中小企業であり，各々インドネシアと中国へ進出している。オプコの主な製品は自動車のエンジン回りの部品であり，トヨタ自動車への売上が全売上の 80.0%以上である。助川鉄工は固形潤滑剤ワックス，フランジ塗布器，各種専用機などを生産しており，商社を経由してアジア地域と欧米地域へ商品を販売している。以下に両社の海外への活動を挙げてみる。

A. 海外投資の背景：近年は国内市場の需要の減少，国内生産コストの上昇，国内における雇用の確保が困難，自動車の国内生産量の減少などがあり，十年前から海外進出が始まった。オプコはトヨタ自動車が進出し，人口が多くかつ今後も自動車の需要の見込みのあるインドネシアで工場を立ち上げた。現在では，インドネシアの生産量は同社の国内生産量の 50.0%に近くに達している。助川鉄工は生産コストが低くかつ市場が大きい中国へ進出している。

B. 台湾の投資環境：台湾の生産コストが中国より高く，国内市場も大きくないため，市場が大きな地域へ進出することにした。

C. 台湾企業と取引や提携：両社は直接的には台湾と取引や提携を行っていない。しかし，オプコが使っている機械は，日本の機械メーカーが OEM 方式により台湾の機械メーカーに生産委託をして，日本へ輸出している台湾製の機械である。オプコは台湾製の機械の品質が高いので，これからは台湾と日本の機械産業が提携する可能性が高いと考えている。助川鉄工は，商社を経由して台湾における鉄鋼メーカー（中国鋼鉄，豊興鋼鉄などの大きな鉄鋼メーカー）へ製品を提供している。今後は，もっと台湾の市場を理解し，台湾の鉄鋼メーカーと深く付き合っていきたいと考えている。しかし，現時点では，台湾の相対的に高い生産コストを考えると，台湾への進出は躊躇せざるをえないと考えている。

6. おわりに

本研究では，台湾の「台日産業提携架け橋プロジェクト」実施以降の，愛知県と三重県の企業の台日産業提携に対する視点の差異を捉えた。また，政府間の産業提携覚書を締結すれば，台日産業提携に対してインセンティブの効果が発揮できるか否かも見てきた。

上述した三重県の企業と愛知県の企業の台日産業提携への対応と見方及び両県の提携政策の比較から，今後の台日産業提携を進展させるためのポイントを挙げてみると，次のようになる。第一に，アンケート調査から見る限り，三重県と愛知県の企業の台湾企業との提携や取引経験及びその形態，台湾の投資環境に対する認識，台湾政府と地方自治体の台日産業提携政策に対する印象，台日産業提携に双方の企業が感じるメリット，台湾企業と提携する意向，台湾企業と提携する時に発生する課題と必要なサポート，台日産業提携の発展の見込みなどについては，意見に大きな差異がないと見られる。しかし，企業や産業提携には，細かい点の違いに留意すべきである。というのは，海外進出の経験の差，経営体質の違い，所属する産業の違い等により，企業の提携に対する判断が微妙に異なるからである。現に両県の企業の細かい差異がアンケートからも伺えた。

第二に，三重県の企業は，愛知県の企業より国際化が進んでおらず，また，海外進出の経験や人材など経営資源の不足もあり，それゆえに，日本政府や地方自治体からの誘致政策や支援政策を大いに期待している。これに呼応して，三重県は2012年に「海外展開戦略」，2013年には「みえ国際展開に関する基本方針」などの企業の国際化を促進する政策と措置に取り組んでいる。例えば，産業提携覚書締結や提携ができる対象国を増やしている。このような政策・措置が他の地方自治体にも望まれるのである。但し，各地方自治体の抱える企業の特性や志向に合った施策でなければならない。

第三に，両県の企業には地方自治体と台湾政府との提携・交流を積極的に促進すれば，両国の産業提携・交流は発展するといるという見方が多かった。三重県は台湾政府と産業提携覚書を締結している。さらに，三角提携体制を築き，台湾企業と三重県の企業のマッチング機会の創出に注力している。上でも述べたが，要は，日本企業と台湾企業が相互にメリットを感じなければ，提携は成功しないので，両者の綿密な意見のすり合わせと，一致への努力が必要である。これを抜きにして覚書の成立のみで成果が挙がると考えるべきではない。

第四に，三重県の企業と愛知県の企業は大企業もあるが，数の上では，中小企業が中心の産業構造である。中小企業にとって，海外へ進出する時，パートナー探し，外国語で対応できる人材，進出相手国の投資情報，必要な調達資金などの点で課題はかなり多い。そのため，両県の企業にとって，海外へ進出する時，中小企業支援機関，銀行，ジェトロ，進出相手国の機関などからの支援が重要だと考えられる。特に，中小企業に関する支援機関の充実が望まれる。

総じて，台湾政府が推進した台日産業提携プロジェクトに対して，台日双方の産業・企業にとってインセンティブがあり，また，台湾企業と日本企業は，提携すれば双方にとってメリットがあるので，台日産業提携の発展を促進させていく可能性が高い。しかし，台日産業提携の発展にはまだいくつかの課題が残っている。第一に，台湾の政府と産業提携覚書を締結している日本の地方自治体は少ない。現在，台湾と正式に産業提携覚書（MOU）を提携している日本の地方自治体は二県のみであるので，中小企業の台日産業提携に対してインセンディブの効果が充分に発揮できていない。第二に，日本の政府や，公的機関あるいは民間企業等の台湾の投資環境や台日産業提携の誘致政策に対する認知度はまだ低い。その原因は，①日本と台湾双方の，提携・交流などの情報発信の不足，②日本側の台湾に係る投資環境情報の収集・提供の不足，③日本と台湾双方の産業協会と政府担当機関の交流の不足，④日本の台日産業提携政策に対応できる仕組みと人材，資源が不十分であることである。

台日産業提携を発展させるために，また，台湾と日本双方の企業がWin-Winの関係となるために，台日産業提携に対応する政策と措置を強化するべきであろう。そのため，ここで，台日産業提携について日本側と台湾側双方のあるべき改善点を検討することにした。先に，台湾側からの改善策を取り上げる。第一に，台湾と日本の地方自治体との交流・提携の促進が必要である。台湾は，日本と正式な外交関係を締結していないので，台湾政府は，日本政府以上に地方自治体と対等な提携・交流をすることが難しいのが現状である。現在，台湾TJPOと産業提携覚書（MOU）を提携している日本の地方自治体は和歌山県と三重県しかない。台湾政府は地方自治体との間で地方自治体・台湾間の一層の交流・提携の促進政策を練る必要がある。台湾と地方自治体と交流するためには，相互の産業構造を検討するセミナーや，それにもとづいた企業交流・提携セミナーなどを台湾と日本双方で開催し，相互の理解を図るなどの地道な努力が必要となろう。

第二に，三重県が促進している「官・官，学・学，産・産」という「三角提携」が日本の他の地方自治体や他の

国との提携形態の参考になる。現時点では，台湾と日本との提携・交流は，「官・官」と「産・産」の提携形態が多く，学術的な交流が不足している。そのため，将来は「学・学」間の提携・交流や学術的な研究を通して，日本の各地方自治体の産業の特色と強み・弱みを把握し，台湾と各地方自治体間の強み・弱みを補完できる機会を創出できるようにすべきであろう。

第三に，台湾と日本双方は産業協会間（例えば，食品産業組合，機械産業組合など）の交流を促進することが必要である。日本の大企業を除いてみれば，台湾と日本は中小企業と製造業が中心になっている産業構造である。しかし，現時点では，台湾と日本の間の産業協会の提携・交流が不足している。産業協会は企業と強いつながりを結んでいるので，企業の経営動向や経営課題などの情報を把握している。そのため，台湾と日本の産業協会間の提携・交流を促進して，双方の企業のマッチングの機会を創出すれば，台日産業提携の成功モデルも多くなるであろう。

第四に，台日産業提携政策の情報発信を強化する必要がある。調査結果によると，多くの日本における政府機関，愛知県などの地方自治体，産業機関，日本企業などは台湾側の台日産業提携政策についての情報を知らない。日本の大企業並びにその下請的な関連企業は既に海外に進出に関する情報は相当にもっているが，今回の調査でわかったように，いまだ海外進出に慣れていない中小企業は，進出の意向があっても，情報が不足しており，海外進出への経営判断の仕方もわからない企業が多い。したがって，台湾政府は，日本側に対し，これらの情報の発信を強化すべきである。例えば，台湾と日本の地方自治体との提携・交流の情報，地方自治体との相互訪問，台湾と日本双方でのセミナーの開催，各種展示会への参加などの活動を活用し，台湾の知名度を高める必要がある。さらに，台湾産業に係る政府機関や台日産業提携の担当窓口は，台日交流の情報，提携している地方自治体に関する情報のホームページでの発信を強化することが大切である。

第五に，台日間の投資誘致対象産業を適切に選ぶ必要がある。現在,「台日産業提携架け橋プロジェクト」の誘致対象産業は6つである[8]。また，2012年11月29日に台湾亜東関係協会と日本交流協会が「日台産業協力架け橋プロジェクトの協力強化に関する覚書」(MOU) を締結し，11項目[9]の特定産業を選定した。台日双方が選択した産業は，ほとんど技術集約，資本集約産業である。これには，第一次産業の農林漁業や第三次産業のサービス産業が入っていない。台日産業提携を発展させるため，台湾側は，日本の地方自治体の産業発展の特性と台湾の産業構造の特性とをマッチさせるのに相応しい誘致対象産業を地道に選び出す必要がある。例えば，三重県を対象とした場合，水産養殖業，農業，食料品，食品加工機械，観光業，宿泊業，医療・保健衛生業など，この地方の特色ある産業を奨励産業に取り込むことを検討する必要があろう。

日本側の政府や地方自治体の場合にも，上述の台湾側の5つの改善策に取り組む必要がある。また,「台日産業提携政策に対応できる措置と仕組みの強化をすること」という改善策も取り組むべきなのであろう。今後のためにいくつかの改善策を取り上げると，①地方自治体における台日産業提携担当窓口機能の強化，②台湾での「駐台商務協進連絡処」やサポートデスクの設置，③台日産業連携に対応できる人材の発掘と育成，④中国語や英語に対応できる人材の発掘と育成，⑤海外展開を希望する中小企業への支援機関の仕組みの強化，⑥台日産業提携の誘致政策に対応する充分な予算を設けるなどの面を強化するべきであろう。

研究後記

本研究をまとめるにあたって三重県の企業と愛知県の企業に対してアンケート調査とヒアリングを実施し，多くの方々から協力やサポートをしていただきました。各位に大変感謝しております。特に，アンケート調査に協力していただいた三重大学　西村訓弘副学長（併任地域戦略センター長），柴野知也前研究員，名城大学経営学部福島敏司マッチング・コーディネータ，アンケート調査のデータの整理，検査，分析などをしていただいた台湾経済部統計処　王守玉係長，三重県における台日産業提携の情報を提供していただいた三重県雇用経済部ものづくり推進課　安藤智広主事の方々に心から厚くお礼を申し上げます。

注

(1) 2013年7月に三重県庁における海外投資の担当幹部・研究者を訪問した。また，2012月7月から2014年7月まで，三重県と愛知県の企業に対して詳細なインタビュー調査を行ってきた。

(2) 2013年10月，三重県庁からの提供である。

(3) 2012年7月に三重県庁，三重大学，愛知県庁と名古屋市における日本企業などの専門家を訪問し，2013年7月に三重県庁における海外投資の担当幹部・研究者を訪問した。また，2012月7月から2014年7月まで，愛知県と三重県における企業に対して詳細なインタビュー調査を行ってきた。

(4) このA化学株式会社については企業側の意向により社名は公表しない。

(5) 防爆型IH加熱反応缶は中部電力，日本電熱および伊藤工機が共同開発した安全増防爆IH加熱方式の反応缶で，400℃超の高温領域まで加熱可能である。大型IH調理機は脂肪酸を薄膜状にし，300℃の真空下で連続蒸留をおこなう専用装置として2基開発・納入した。

(6) 株式会社テムザックはロボット，医療・福祉機器などの設計開発，製作，実験，評価，解析などを主な事業分野としており，本社は福岡県にある。

(7) 資本金は6千6百万NTドルであり，100%の資金を日本企業が投資している会社である。

(8) 航空，半導体機械，グリーンエネルギー，バイオテクノロジー，デジタルコンテンツ，ハンドツールなどが戦略産業である。

(9) 風力発電，太陽光発電，電気自動車，LED照明，金物，機械部品，電子設備，デジタルコンテンツ，バイオ医療，情報サービス，電子商務取引など11項目の特定産業を選定した。

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4）公益財団法人あいち産業振興機構編集・発刊『2012年における愛知県内企業の海外事業活動』，2013年9月発刊，p6。

5）公益財団法人あいち産業振興機構編集・発行『平成25年における愛知県内貿易港の輸出入動向』，2014年8月，pp10-18。

6)「三重県統計書・累年統計表」の「平成26年刊三重県統計表」の「11. 商業・貿易」の資料を参考にした（みえデータBOXホームページ：http://www.pref.mie.lg.jp/databox/tokeisho/tokei14/bunya11.htm)。

7）同3）と4)。

8）林冠汝・西村訓弘「台日産業提携の現状と課題―東海地域産業の視点から」，『2013年第八屆外國語文教學與跨文化研究國際學術研討會論文集』，真理大学英美語文学系・応用日本学系編集，2013年12月10日，pp156-180。

9）三重県雇用経済部編集『みえ産業振興戦略』，2012年7月。

10）三重県雇用経済部編集『みえ国際展開に関する基本方針』，2013年9月。

11）同9）と10)。

12）株式会社医用工学研究所のホームページ（http://www.meiz.co.jp/company.html）の資料を参考にした。

13）佐藤祐一「『今，何のために学ぶのか』～学生の間に何をすべきか～」，愛知淑徳大学「インターンシップ概論」の講演，2012年6月13日。

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COMPARISON OF THE INDUSTRIAL VIEWPOINTS FOR TAIWAN-JAPAN INDUSTRIAL ALLIANCE BETWEEN MIE PREFECTURE AND AICHI PREFECTURE

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Abstract

Since the implementation of the Taiwan-Japan Industrial Alliance Program, industrial Alliance and exchanges between Taiwan and Japan have steadily increased. Mie Prefecture, the first to sign an MOU for industrial Alliance with Taiwan, has since used the triangular alliance of government-industry-academia as the model to effectively implement its policy. This has resulted in many material exchanges and cooperation between the two countries. Moreover, Mie government is able to draw on the capabilities of Mie University's RASC with JETRO to help it select potential Taiwanese companies in order to give the program more focus and to maximize the chances of success at matching Japanese companies with Taiwanese companies.

Although Mie and Aichi's small to medium sized companies possess world-class production technologies, they are deficient in international experience and resources. In contrast, Taiwanese companies have plenty of experience in international trade and investment. This complementarity makes industrial Alliance mutually beneficial to both Taiwanese and Japanese companies and illustrates why it is necessary to continue to promote this program of industrial collaboration. In the future, Mie's foreign investment efforts in Taiwan will concentrate on small to medium sized companies and will continue to use the model of triangular alliance as a template for success.

KEY WORDS : Industrial Alliance, Industrial Cooperation, Taiwan Japan relation, Mie Prefecture, Aichi Prefecture.

MIGRATION INTO A COUNTRY OF SAKOKU: JAPAN'S ACCEPTANCE OF FILIPINO AND INDONESIAN HEALTHCARE WORKERS

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Abstract

Under its Economic Partnership Agreements (EPAs) with Indonesia and the Philippines, Japan began accepting nurse and care worker candidates from Indonesia and the Philippines in 2008 and 2009, respectively. This scheme seemed to bring about a breakthrough in Japan's sakoku (isolationism) migration policy, but the success rate of foreign applicants remains very low. This paper discusses Japan's migration policy and the importance of transmitting complete information to ensure aspiration and confidence for healthcare worker applicants. It also concludes that an increase in the number of overseas healthcare workers will not be expected as long as the Japanese government is very cautious in opening its door to the outside world.

KEY WORDS : foreign healthcare workers, JPEPA, JIEPA, migration policy

1. Introduction

"At some point in life, it is likely that everybody will be cared by a nurse or a care worker. It is essential to consider the ramifications of accepting foreign workers to fill these roles that have such an intimate connection to our daily lives . . . To what extent is it possible for Japanese people to accept foreigners who follow a different culture, traditions, and customs into their lives? How far can outsiders be accepted into such a homogeneous society? And if it is not feasible, then what are the reasons? What is true 'internationalization' for Japan? When Filipino nurses and care workers and Japanese meet face to face, these are questions that every Japanese person must ask themselves."

By Ministry of Foreign Affairs, EPA negotiation Team
Source: Watanabe. 2007: 288-290.

Japan did not follow the global surge in immigration of unskilled workers during the 1990s, which swallowed Asian countries such as Hong Kong, Singapore, South Korea and Taiwan. In these nations, that underwent the transformation from net emigration to net immigration, foreign household workers essentially upheld their rapid economic growth (Findlay, 1998). In contrast to these Asian countries, active acceptance of foreign guest workers has never been a policy alternative for solving the labour shortage in Japan.[1] There are only exceptional cases of second- and third-generation Nikkeijin (i.e. descendants of Japanese emigrants), such as Japanese-Brazilians, supplementing the shortage of domestic workers in secondary industries, such exceptions, however, do not imply an opened door to immigrants (Takenoshita, 2013). Instead, it might be a well-crafted measure to allow foreign workers into a secondary sector without fundamentally modifying the migration policy. In Japan, the necessity of foreign workers to solve the domestic labour shortage is preceded by concerns about possible problems pertaining to these individuals. These include an increasing discrepancy and incompleteness of the labour market, or even trafficking and other issues, which the government is concerned about resulting in a vicious circle of illegal residence and en-

(1) Japan's fundamental position with regard to the 'movement of natural persons' is that accepting persons in specialist and technological fields was actively encouraged because of their contribution to revitalizing and internationalizing the economy, while greater caution was shown toward accepting unskilled workers in order to protect employment opportunities for the elderly, women, and the young and to limit the potential costs to society (the 9th Basic Plan for Employment Policy in August, 1999). Meanwhile, in view of the need for unskilled workers in Japan, there are cases in which such workers are accepted through training and technical study programmes. The reality is somewhat different from the official position (Ueda, 2008: 48).

forced repatriation (Iguchi, 2005).

On the other hand, Japan is taking a more proactive approach to accepting overseas specialists. This follows Singapore and China (especially Shanghai), who lead in the positive employment of highly-educated and skilled overseas workers in an effort to strengthen their international competitiveness (Abella, 2009: 15). Although it is late to join this trend, Japan has started to value the advantages brought about by foreign skilled workers, such as acquisition of top-level skills in the latest industry and well-prepared workforces. For example, the government's 'IT Strategy Report' in 2000 set a target of attracting 30,000 overseas specialists within five years. The country standardized its qualifications system and relaxed the residence-permit criteria for IT specialists.

After a decade of launching this strategy, has Japan successfully brought in global specialists? According to Matsushita (2011), the typical foreign IT worker in Japan today is Asian, usually Chinese or Korean, whose status is slightly lower than the mid-level position in a Japanese-style pyramid industrial structure. This is in contrast to the government's "targeted" candidate: a professional with high-level expertise who can bring about innovation to Japan's IT industry. The reasons for this discrepancy, according to Matsushita, are the culture and business practices of Japan's IT industries, which as sometimes called "Galapagos Syndrome," the limitations placed on the work entrusted to foreigners, and the strait gate to Japanese corporations for those who are not alumni of Japanese educational institutions. It is also pointed out that the Japanese language stands as the last barrier for foreign immigrants. (Matsushita, 2011: 146-147)

In 2008 and 2009, another task was set for the Japanese government to accept foreign specialists. Under the Japan-Philippines Economic Partnership Agreement (JPEPA) and the Japan-Indonesia Economic Partnership Agreement (JIEPA), Japan began accepting foreign healthcare worker (FHW) trainees from Indonesia in 2008 and from the Philippines in 2009, and this scheme seemed to bring about a breakthrough in Japan's sakoku (isolationism) migration policy. However, in spite of the strong requests from the governments of the Philippines and Indonesia for deployments of healthcare workers, the number of candidates who came to Japan fell far short of the bilaterally-approved limit of 400 nurses and 600 care workers from each country for the first two years. In addition, passing the national exams in Japanese, a necessary condition of working in such jobs in Japan, posed a very high hurdle to the trainees from overseas and the passing rate for non-Japanese candidates in the national nursing exam remains low at 4.2% in 2011, 11.3% in 2012, and 9.6% in 2013. Despite having undergone training and work experience for three to four years in pursuit of their dream of working in Japan as nurses and care workers, candidates who fail to pass the exams must return to their own countries. This state of affairs has raised criticism in the media against the Japanese government's handling of FHW.

Did the government make an irrational decision in accepting FHW from the Philippines and Indonesia? Political and social science scholars incisively elaborate that the acceptance was used as a 'trade-off' for other items involved in the Economic Partnership Agreement (EPA) (Hosono 2011, 83, Yamazaki, 2006, Ohno, 2012). Simultaneously, scrutiny of the negotiation process does not vindicate the media's criticism, as we later discuss. The Ministry of Foreign Affairs (MOFA) EPA negotiating team was well aware of the fact that foreigners with minimal Japanese language skills upon arrival would have great difficulty working and passing a state examination in Japanese within three to four years and could only leave the final decision in the hands of their opposing negotiator (Watanabe and EPA negotiating team, 2007, 287). Yet, they found that this strict offer by Japan was accepted by their counterparts. Accepting FHW, while stipulating that they needed to have equal qualifications as Japanese workers, was a rational decision for the Japanese negotiating team in order to meet the demands of their counterparts at the international negotiating table as well as domestic stakeholders (Sato, 2014). In that case, What kind of contradictions characterized the Japanese current policy in accepting FHW?

Certainly, the current acceptance scheme might not be serving as a countermeasure against Japan's ageing society with low birth rates, as researchers in the health and welfare fields maintain (Asakuram, 2009, Ogawa, 2009). In the future Japan's labor markets should be opened through aggressive acceptance of overseas workers in general, not just healthcare workers, for Japan to survive aging society as well as global economic competition, as economists assert (Iguchi, 2005; Kwon, 2006; Wailerdsak, 2009). For that purpose, then, what kind of transformation must the Japanese government experience to increase the number of FHW? Are the Japanese people as adverse to FHW as is generally thought? This paper makes an analytical examination into the acceptance scheme and aims to answer these questions.

2. Accepting Foreign Healthcare Workers through JPEPA and JIEPA

At the beginning of the twenty-first century, China was already working on Free Trade Agreement (FTA) with ASEAN, and this urged Japan to start to draw up its EPA with the region. In January 2002, in Singapore, Prime Minister Koizumi declared his concept of 'a comprehensive economic partnership agreement with ASEAN'. Consequently, negotiations on the Japan-ASEAN EPA and between Japan and individual ASEAN nations ensued; the Philippines is one of the core members of ASEAN. An EPA task force was proposed and established in Japan during Prime Minister Arroyo's visit to Japan in May 2002. Starting formal negotiations was agreed at a summit of Japanese and Filipino leaders in December 2003.

During the negotiation, Japan requested to abolish tariffs on components for the automobile, iron and steel, and other industrial products, while the Philippines requested concession of tariffs in the farming, forestry, and fishing industries and the acceptance of Filipino nurses and care workers (Table 1). Neoclassical migration theory considers international society as an economic and labor system that is incessantly balanced. "At the macro-level, neo-classical economic theory explains migration by geographical differences in the supply and demand for labor. At the micro-level, neo-classical migration theory views migrants as individual, rational and income-maximizing actors, who decide to move on the basis of a cost-benefit calculation (Haas, 2011, p. 9)". While neoclassical migration theory cannot explain all types of migration, labor outflow from the Philippines is most pertinently construed as a push model of this theory. The migration of the Filipino people can supply labor at the macro-level and, at the same time, it is a means to seek individual income maximizing at the micro-level. There are many voluntary Filipinos who want to work abroad where wages are higher. The majority of jobs are in household services, but there is also a large outflow of nurses to other countries. In 2001, prior to the JPEPA negotiations, there were already over 135,000 Filipino nurses left their country to work in Britain, Saudi Arabia, Ireland, Singapore, etc. (Buchan, 2003: 31).

Table 1. Japan and ASEAN negotiation: Major items of interest

Japan	ASEAN
1. Elimination of tariffs on materials and parts	1. Market access
2. Rules of investment and intellectual properties	2. Mobility of natural persons
3. Liberalization of trade in services	3. Increase of investments
4. Improvement of the business environment	4. Cooperation and technology transfer

Source: MOFA (2011)

Though the Philippines insisted on dispatching nurses and care workers during the JPEPA negotiation, this request was above and beyond anything anticipated by the Japanese government. In order to cope with the situation, Japan established a task force, whose participants consist of young bureaucrats from the MOFA Consular Affairs Bureau, the MOFA Economic Affairs Bureau, the MOFA Public Diplomacy Department, the Ministry of Health, Labor and Welfare (MHLW), the Ministry of Justice (MOJ), and Ministry of Economy, Trade and Industry (METI). A framework of accepting system of FHW was formulated following intense domestic-level discussions led by the task force. At the international level, the team visited the Philippines over 20 times (Watanabe, 2007: 309). In other words, the decision-making process of accepting foreign health workers was by no means such irresponsible or uncoordinated as was criticized by media. Finally, both parties reached an agreement over the outline of the EPA in November 2004, but it took one year and ten months more before the EPA was signed in September 2006, when Japan promised to accept 400 nurses and 600 care workers during the first two years under fixed conditions.

Following the EPA negotiations with the Philippines, discussions began between Prime Minister Koizumi and Indonesian President Megawati in June 2003 concerning the possibility of an economic partnership agreement between the two countries. As was the case with the Philippines in the negotiations for JPEPA, Indonesia also requested to send its nurses and care workers to Japan. Even though Indonesia had been much slower than the Philippines at sending its workers abroad, during a 5-year project (1989-1994), the Indonesian government exceeded its target of sending 500,000 workers to the Middle East and East Asia by sending 650,000 (Asato, 2006: 6). On the other hand, in contrast to those from Philippines, very few specialist nurses or care workers from Indonesia gained employment overseas. Despite this fact, Indonesia made strong demands during JIEPA negotiations to send its nurses and care workers to Japan. As Japan had a strong, prioritized request for importing energy and mineral resources from Indonesia (MOFA, 2011), in the end, Japan offered to accept the same number of nurses (400) and care workers (600) for the first two years as set out in the JPEPA. The JIEPA was signed in August 2007 and took effect in July 2008.

The data on the Indonesia candidates in 2008 reveals the following. As for care workers, a total number of 104 came to Japan. Of these, three candidates who were exempt from studying Japanese were admitted to introductory care training conducted by the Japan International Corporation of Welfare Services (JICWELS), and they began working while training at two facilities in September 2008. The remaining 101 candidates who were required to learn Japanese studied either at the Association for Overseas Technical Scholarship (AOTS) or the Japan Foundation, and upon completion of their studies they began working while training at 51 facilities in January 2009. Regarding nurses, 104 candidates started working while training at 47 facilities in February 2009 upon completion of Japanese study at the AOTS (MHLW, 2011). Of those candidates accepted in 2009, 361 (173 nurses and 188 care workers), who had already completed 4 months of Japanese study in Indonesia, arrived in Japan in November.[2] After two months of studying Japanese, they commenced their working while training, the nurses at 83 facilities and the care workers at 84 facilities, in January 2010.

The insufficiency of this Japanese language training for FHW is strikingly clear from the pass rate of the foreign candidates in the past years. Although the number of successful applicants for nurse increased from zero in 2009 to 30 in 2013, the pass rate was still very low, at 9.6%. Since the pass rate of the total candidates is 88.8%, the examination cannot be said to be particularly difficult, revealing rather how difficult it is for foreigners to take the examination in Japanese. Though the pass rate of foreign care-giver of 39.8 percent exceeded that for a similar exam for foreign nurses in 2013, it was still far behind that of the total candidates (64.4%) (Table 2). Giving that foreign care-worker candidates have already been qualified as caregivers in their home countries, it was not the level of technical knowledge, but the degree of Japanese acquisition. Then, in what points did the Japanese government mislead the acceptance system? Before we answer this question, let us first discuss whether the Japanese society is as exclusive of FHW as is generally perceived.

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[2] One care worker who was not required to study Japanese arrived in Japan and began work while training in October, 2009.

Table 2. Pass rate among foreign candidates

	Year	Examinees {F,I} (persons)	Passed candidates {F,I} (persons)	Pass rate of FNC (%)	Pass rate of the total examinees (%)
nurses	2009	82 (0,82)	0	0	89.9
	2010	254 (59,195)	3 (1.2)	1.2	89.5
	2011	398 (113,285)	16 (1,15)	4	91.8
	2012	415 (158,257)	47 (13,34)	11.3	90.1
	2013	311	30 (10.20)	9.6	88.8
caregivers	2012	95 (1,94)	36 (1,35)	37.9	63.9
	2013	322 (138,184)	128 (42,86)	39.8	64.4

Notes: F: Filipino candidates; I: Indonesian candidates
Source: MIC, 2013: 165, MHLW (2013.3.28) http://www.mhlw.go.jp/stf/houdou/2r9852000002ycsb.html, MHLW (2013.3.25) http://www.mhlw.go.jp/stf/houdou/2r9852000002xz4d-att/2r9852000002xz8r.pdf

3. Does a Homogeneous Society Accept Outsiders?

According to a survey taken before the acceptance scheme started, the Japan Medical Association (JMA) and the Japanese Nursing Association (JNA) have the same idea that foreign nurses and care workers should not be shunned because of their nationality but subject to the same working conditions as Japanese nurses. They also take a firm stance on taking examinations in Japanese, as communication between medical workers and patients can't be overemphasized (Yamazaki, 2006: 21). At the same time, JNA's major concern is about the deterioration in the working conditions by the acceptance of foreign coworkers. An example of the United Kingdom has indicated that actively hiring foreign workers to deal with a shortage of nurses has led to a vicious circle, in which the treatment of nurses has deteriorated and the number of British candidates hoping to become nurses has decreased. (JNA, 2008).

While the above survey was made before the acceptance, the following is an example from the report of 'International Research Team on Japan's Opening of Its Labor Market in the Fields of Nursing and Care', describing how a Japanese medical institute accepted and treated foreign trainees (International Research Team, 2011: 14-22). One of the candidates accepted by a hospital in Osaka believed in Hinduism. As a result, the hospital immediately changed the menu of their meals because eating beef is forbidden in Hinduism. Furthermore, two senior nurses were assigned to assist the candidate with her shopping. A bicycle, blankets, foods, clothes, and other necessities were contributed by the staff. Volunteers helped her to study for the nurse state examination in Japanese. After she passed the exam, she was assigned to a certain department, and the hospital continues to provide her training opportunities in various departments such as operating room, plastic surgery, out-patient, internal medicine, surgery, rehabilitation and radiology. A Japanese volunteer continues to teach her Chinese characters. All this demonstrates how positively and devotedly the medical institutes and Japanese nurses supported the trainee. Furthermore, there is a report on an Indonesian nurse who passed the state examination in Japanese and currently works in a hospital in Kyushu. Being a Muslim, she covers her head with a scarf, or 'jilbab', wears a dress covering her hands under the uniform, and prays five times a day. At first, the hospital was a little puzzled by this cultural difference. Nevertheless, it did not take long for everybody to understand her religious customs and start supporting and interact with her.

According to the questionnaire survey of 2004, before the scheme, by Keizai Koho Center [Japan Institute for

Social and Economic Affairs], while 59% of those answered agreed to accept FHW and only 34% disagreed, 77% answered 'FHW have to get Japan's qualification', and as much as 91% said 'FHW need to have the Japanese proficiency'. The Japanese people's attitude changed a little, however, after the acceptance. The survey conducted in 2010 by the MHLW of the users of medical institutions and their families indicates that foreign candidates were accepted quite positively, and that trainees enjoy an excellent reputation among Japanese people: 49 individual hospital patients (45.4%) and 59 families (56.2%) reported, 'Since the candidate was cheerful and full of energy, the atmosphere in the institution also became bright compared with before'. Regarding the level of the quality of nursing care services provided by foreign candidates, a majority of 61 hospital patients (59.2%) answered, 'It is a level which can be satisfied in general'. Thirty-two users (31.1%) answered 'ordinary', thirteen (12.6%) answered, 'higher quality than Japanese nurses' or 'very satisfactory', and none answered, 'not very satisfactory' or 'not satisfied at all' (MHLW, 2010). In essence, Contrary to what is generally perceived, we can conclude that the Japanese are not necessarily closing their minds to outsiders. In spite of the EPA negotiation team's concern about whether the Japanese society can positively accept FHW, the Japanese are in fact willing to be helped by foreign medical workers as long as they can communicate with workers in Japanese. In essence, the homogeneous Japanese people are not exclusive to outsiders, but they prefer foreigners' speaking Japanese. Now, let us shift our attention to the policy of the Japanese government in order to examine the problems of this scheme of accepting FHW.

4. Absence of Transmission of Thorough Information

This section examines the importance of transmitting complete information in order to eliminate the number of unsuccessful foreign candidates in the future and boost the chances of prospective applicants. As shown in Table 3&4, the number of candidates who came to Japan from Indonesia in the first two years fell far short of the bilaterally-agreed limit of 400 nurses and 600 care workers from each country. Tsukada, et al. (2010) cited the following reasons for the low number of applicants from Indonesia in the first year (2008): 1. The notice and application period was too short owing to the Japanese Diet's delay in approving the agreement. 2. As there was no qualification in Indonesia for care workers, application requirements had to be changed. 3. Half of the applicants were male, but Japan wished to accept a greater number of females (Tsukada, 2010: 7). These problems were solved and the number of nurse applicants showed some increase in 2009 (Table 3 & Figure 1).

Table 3. Nurses and caregivers candidates dispatched to Japan under JIEPA (unit: person)

Year	Nurse Candidates	Caregiver Candidate	Total
2008	104	104(3)	208(3)
2009	173	189(1)	362(1)
2010	**39**	**77(2)**	**116(2)**
2011	47	58(1)	105(1)
2012	29	72	101
2013	48	108	156
Total	440	608(8)	1048(8)

Notes: The number in parentheses represents candidates who were exempt from the six-month Japanese study course required by the agreement (those with JLPT N2 [formerly, JLPT Level 2] or above). The number is included.
Source: MIC, 2013: 164, MHLW (2013.7.1) http://www.mhlw.go.jp/file/04-Houdouhappyou-12004000-Shakaiengokyoku-Shakai-Fukushikibanka/0000041993.pdf

Table 4. Nurses and caregivers candidates dispatched to Japan under JPEPA (unit: person)

Year	Nurse Candidate	Caregiver Candidate		Total
		Working Course	Schooling Course	
2009	93	190(10)	27	310(10)
2010	46	72(2)	10	128(2)
2011	70	61(1)	--	131(1)
2012	28	73(2)	--	101(2)
2013	64	87(6)	--	150
Total	301	483(21)	37	821(21)

Notes: 1. Same as the Note of Table 3
2: The schooling course for Filipino caregiver candidates is conducted at a training facility in Japan and is aimed at helping students find employment as a care worker after they have completed their qualifications.
3: No applications were taken for the schooling course since 2011.
Source: ditto

Figure 1. Nurses and caregivers candidates dispatched to Japan under JIEPA (unit: person)

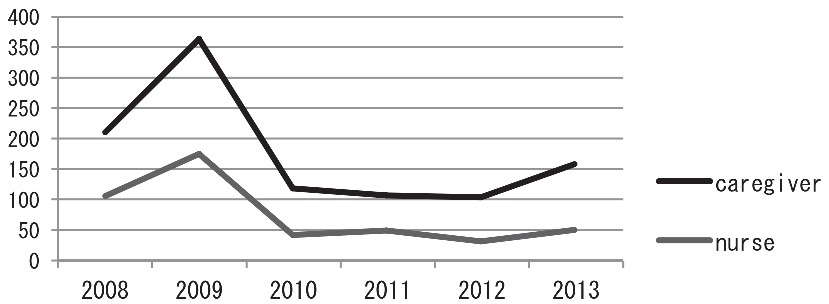
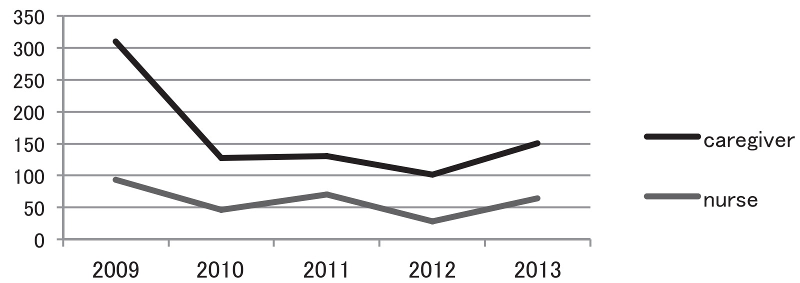


Figure 2. Nurses and caregivers candidates dispatched to Japan under JPEPA (unit: person)



However, what was striking was the sharp decrease in 2010 both in Indonesia and the Philippines. The number of applicants who came to Japan in 2010 both from Indonesia and the Philippines dramatically decreased, as for nurse candidates, from 362 (2009) to 116 (2010) from Indonesia, and 310 (2009) to 128 (2010) from the Philippines, as for caregivers, from 189(2009) to 77(2010) from Indonesia, and 117(2009) to 82(2010) from the Philippines (Figure 1&2). The reason of this drop can be easily surmised. The first national nurse exam for the foreign candidate was conducted in 2009 with no successful candidates out of 83 examinees. The despairing result of the foreign examinees is enough to discourage the prospective applicants in 2010 both in Indonesia and the Philippines. The actual training/working condition in Japan also immediately became widely known since many candidates returned to their countries soon after the beginning of the acceptance programme. For example, as much as 62 Indonesians have returned home during the first two years. According to the Ministry of Foreign Affairs, this was due to 'marriage and family reasons,' while some were 'exhausted from trying and failing to pass the examination' (West Japan Newspaper, 2011). Some nurses in the Philippines claimed that the bilateral agreement shortchanges the professional qualifications of Filipino nurses and exposes to potential abuse and discrimination and a strong rejection again JPEPA was reported (STSRO,2012).

Setyowati, Faculty of Nursing University of Indonesia, explains the situation of unsuccessful candidates as follows. Most of the candidates were working as nurses in Indonesia; however, they cannot and must not perform nursing work either as nurses or proper trainees in Japan because they do not have the requisite qualification specified by the Japanese government. They were very disappointed and shocked about not being able to practice medicine in Japan. They were not allowed to prepare injections; instead, they were assigned to assistant jobs, such as changing diapers or cleaning aspirators — jobs that were below their skill sets. Sometimes they found it difficult to remain motivated to continue studying in Japan (International Research Team, 2011: 43). Insufficient transmission of information caused all of this.

In other words, those baffled in their aspiration will gradually decrease in number, when the reality becomes well-known among the future applicants. In fact, most of the applicants in 2010 and after were still determined to come to Japan even though they already knew sitting for the national test in Japanese was 'close to impossible' (Asakura, 2009: 67-74). If 'aspiration' and 'confidence' are major migrant determinants as de Haas argues (de Haas, 2011: 16), the applicants in 2010, who were voluntary immigrants, must have had strong determination because they perceived better opportunities in Japan and chose to confront the difficulties. Needless to say, governments of both countries need to take initiative and inform applicants of the real situations in as much detail as possible. The more adequate the information among prospective applicants is, the lower the number of what the media call 'the victims of the acceptance scheme' will be. At the same time, it is inevitable that the total number of applicants will be less as long as the Japanese system of accepting FHW remains unchanged.

5. Various Governmental Countermeasures, but an Unchanged Principle

Facing the media's criticism against the accepting scheme, the Japanese government has started to tackle the problems with various countermeasures. For example, to decrease the burden of teaching Japanese language to foreign candidates, normally borne by medical institutions, the government increased budgets to enhance Japanese language courses and support medical institutions in their education of trainees. Various support programmes began in 2010, such as the, 'Foreign nurse candidate educational support programme' (2010 annual budget: 117,002,000 yen), 'Foreign caregiver candidate educational support programme' (62,273,000 yen), 'Foreign nurse candidate vocational training support programme' (251,818,000 yen) and 'Educational support programme of foreign care-worker candidates for accepting institutions' (289,990,000 yen) (MIC, 2013: 163).

Furthermore, candidates from Indonesia and the Philippines who came to Japan in 2008 and 2009 became eligible for a one-year visa extension following a cabinet decision on March 11, 2011, that recognized 'the difficulties faced by applicants in gaining the necessary qualifications.' Even though this applied only to those applicants who scored at least 102 points (standard pass mark 203 points, maximum 300 points) in the February 2010 examination, 68 applicants were given a second opportunity to take the examination (Chief Cabinet Secretary, 2011). In addition, on June 20, 2011, the discussion group of Chief Cabinet Secretary resolved to cooperate with the partner countries to strengthen the system for teaching Japanese in applicants' home countries and introduce various measures to help applicants overseas to understand Japan's nursing and care systems. This pre-visit language training programmes aim to cope with the demand from medical institutes for candidates with a higher command of Japanese language skills. The programme strives to enable prospective applicants to achieve a certain level of proficiency in Japanese before leaving for Japan. The MOFA administers the pre-visit training programmes in Indonesia and the Philippines and post-visit training programmes for Indonesian candidates, while the METI is in charge of post-visit training programmes for Filipino candidates.

Then, Are these policies expected to facilitate the increase in the number of foreign nurses and caregivers in Japan in the future? There are strong doubts about it. The reason is that the principle of Japanese migration policy has not changed at all. The flowing are the stances of government agencies related to the acceptance of FHW. Firstly, the MHLW, a major actor of the task force in charge of accepting FHW, has published the statements in their website: 'Accepting nurses and care workers from overseas as a part of this agreement is the result of negotiations based on the requests of our partner countries, and it has in no way been sought by Japan as a means to deal with any shortage of labor in the field of nursing and care work. In response to our partner country's request to send applicants to Japan to pursue a Japanese qualification, and in order for the EPA to run smoothly . . . the MHLW has increased its support for applicants at the study facilities and revised the terminology used in the examination.' (MHLW, 2012) The attitude of the ministry is apparently not very positive and reveals the extent to which accepting FHW was premature and unanticipated for the authorities. Given the uncertain prospects for Japan's economy, the MHLW saw care work as a future area of job creation, and it was cautious in accepting FHW (Yamazaki, 2006). The ministry, which is responsible for all of health, medical care, welfare, caregiving, employment, and labor, clearly prioritized concerns for employment and labor over future shortage of healthcare workers. Even though the Ministry of Justice's 'Second Basic Plan for Immigration Control' in 2000 proposed accepting overseas specialists and professionals in the fields related to care work (MOJ, 2000), the interpretation and judgment of the situation by the MHLW was different from that of the MOJ, while the reality is that the salary of care workers is quite low, and that the job separation rate is much higher than that of the total labor.

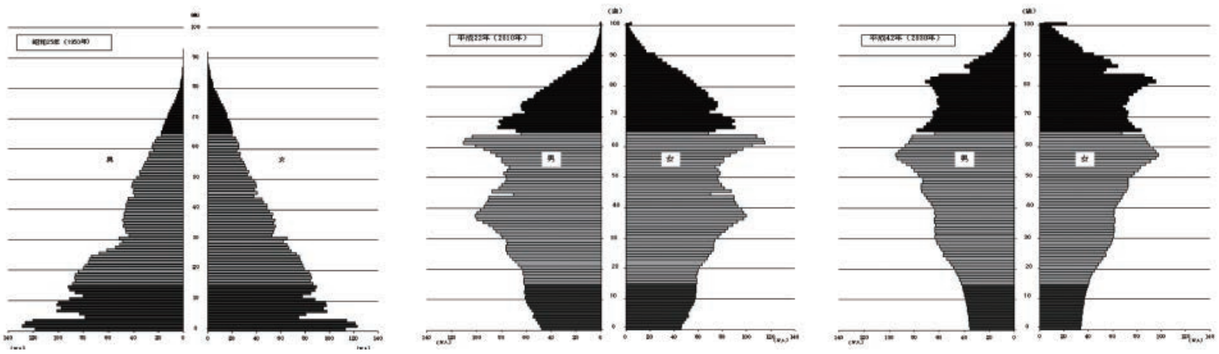
The major actor of Japan's negotiation of EPAs, the METI, also remained cautious about accepting workers through the EPA. In signing JPEPA in 2006, the METI asserted, 'we have not relaxed the immigration criteria, but rather added nurses and care workers to the list of specialist and technical workers eligible for immigration. This does not constitute a change in our policy on accepting foreign workers' (METI, 2007: 470). The METI's stance is shared by Ministry of Internal Affairs and Communications (MIC). One of the most recent reports published by the MIC provides a clear and accurate explanation of the acceptance of foreign candidates of nursing and caregiving: 'The acceptance programme is implemented from a viewpoint of strengthening the cooperation of bilateral economic activities between Japan and Indonesia and the Philippines based on the strong request from these countries.' The MIC emphasizes that the acceptance is not meant to correspond to the shortage of labour in the nursing and care field (MIC, 2013). Even though EPAs appear to have embraced new opportunities in facilitating the international movement of people, the official statements of government agencies reveal an unchanged fundamental attitude of the Japanese government towards immigration of FHW. Under its political determination to be very cautious in opening its door to the outside world, the increase in the number of FHW will be hardly expected.

6. How to Cope with the Ageing Society

Then, is the Japanese government correctly interpreting the future supply of medical workers in saying that there is still no necessity to employ foreign nurses and care workers? Demographically speaking, Japan has enough pull factors for migratory workers since it faces the same situation as other developed countries such as the U.S. and England, which have long established an institutional framework of accepting FHW. On the one hand, Japan's birthrate is decreasing with total fertility rate of 1.4, one of the lowest in the world. On the other hand, Japanese people have the highest life expectancy in the world and the population is aging rapidly (Figure 3).

The country became an aged society (i.e., people aged 65 and above constitute more than 14% of the population) in 1994. Consequently, a shortage of healthcare workers is expected in the near future as the working population able to provide such services has proportionately decreased. As Asakura (2009: 67-68) points out, nursing jobs might be adequately supplemented by the domestic nurses over a short time span, but, as the effects of a low birthrate and an aging society become more pronounced over the next 10–20 years, the number of social welfare professionals will become insufficient. It is estimated that by 2025 the number of nurses and care workers will be short by over 300,000 and 700,000 respectively (Nikkei newspaper, 2012).

Figure 3. Change of population pyramid of Japan



1945 2010 2030 (estimation)

Source: Statistics Bureau of the Ministry of Internal Affairs and Communications, "Population Pyramid", http://www.stat.go.jp/data/kokusei/2010/kouhou/useful/u01_z22.htm
Note: Right side as the number of women, left side as the number of men

If Japan is to promote immigration of FHW to cope with this situation, a valuable lesson could be the examples of the United Sates, a country that attracts many Filipino nurses. It is inappropriate to interpret this situation of US as an indication of relatively free movement of skilled workers into the country. The United State has a strict pre-screening mechanism conducted for foreign healthcare professionals who seek entry into the country. There are agencies that examine the documents of foreign applicants and interview them in applicants' home countries in order to screen those who have a potential of passing the American national exam. The successfully screened foreign applicants then have to pass an English language proficiency test and a preliminary exam of Commission on Graduates of Foreign Nursing Schools (CGFNS) in their home countries before they can sit for the American national exam of National Council of State Boards of Nursing Licensing Examination (NCLEX). The American government also stipulates medical facilities to recruit U.S. nurses before hiring foreign nurses and prohibits displacing U.S. workers in similar occupations within 90 days prior or after the hiring of foreign nurses (Wasem, 2009: 13). In short, the US government is very cautious for receiving FHW and prioritizes the domestic labor market just like the MHLW, while providing high wages and substantive social welfare guaranteed for the foreign professionals. A successful acceptance scheme must be supported by deliberate policies and matured institutional framework.

Japan even needs to offer more incentives than the US does given its disadvantageous terms for the foreigners to have to take the national exam in the formidable Japanese language. According to Hosoda's interviews (2011: 122-124) of students from nursing departments at universities in the Philippines in 2009, the preferred areas of work were English-speaking countries such as the United States, Canada, and Australia. The language barrier was cited as the main reason why students did not want to work in Japan.

7. Concluding Remarks

This paper has examined the Japanese migration policy and analyses Japan's scheme of accepting FHW under JPEPA and JIEPA. We first discussed that the complete transmission of information could avoid "victims of the scheme" even though the number of applicants might decrease. It should be added, however, that there is a situation that bodes well for Japan now: Due to the effects of Japanese pop culture such as anime and manga, the number of young people (primarily high-school students) in Indonesia desiring to study Japanese was increasing greatly and reached 716,653 persons in 2010, which was 32 times as many as that of the Philippines (22,362 persons). In Indonesia a high level of interest among young people in working in Japan is combined with the high level of wages in Japan, making it an attractive work destination (Ohno, 2012: 539). The METI has started enhancing contents industry as one of the prospective locomotives for Japanese economic development, and this strategy of the METI has turned out to have a synergistic effect of promoting interests in Japan and the Japanese language among foreigners. This example of Indonesia also means that Japan needs in the future to scheme country-specific programmes for accepting FHW based on the individual conditions of partner countries, instead of grouping all ASEAN countries together as one unit. Since each country differs in push factors of migration, the content of the EPA items should be adjusted in accordance with these differences.

This paper has also made clear that medical institutions and their users accepted foreign trainees quite positively and amicably in spite of a general belief that the Japanese society is exclusive of outsiders. As for the Japanese government, on the other hand, being criticized for its handling of the acceptance system, it has implemented various countermeasures such as increasing budgets and establishing pre-visit Japanese language education in foreign workers' native countries. However, this paper has made clear that the government shows little willingness to change the current migration policy(3), and is not taking positive measures to change the status quo. Kaifu (2008: 84-98) portrays this situation of Japan as a convenient, clean, safe and comfortable 'sakoku (isolationism) paradise'.

Yet, it is reported that a recent shortage of care workers is creating care and nursing fatigue among some families, which causes depression, or even suicide. Japan is asked to consider increasing the number of FHW. We have looked at the case of the US, where cautious policy is taken to protect domestic employment environment while opening its doors to FHW with full support after their arrival. This policy of Us might be a good model for Japan. Japan can also learn from other Asian countries, such as Taiwan(4), where nurses and care workers have different immigration criteria. These countries open their doors only to foreign care workers to cope with the shortage of domestic healthcare workers. Or, another option for Japan could be to consider new positioning for overseas nurses from the perspective of seeing them as people who can speak English rather than as ones who cannot speak Japanese. In fact, most of the medical records written by Japanese doctors are in English. Now, Japan needs more flexible policies as 'Sakoku paradise' is no longer that heavenly.

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研究ノート

Research Note

インド：第16回連邦下院議員総選挙について
THE STUDY ON THE 16TH LOK SABHA GENERAL ELECTION IN INDIA

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要旨

インドでは，2014年4月から5月にかけて，第16回連邦下院議員総選挙が行われた。この選挙の結果，国民会議派を中心とするUPAが敗れ，BJPを中心とするNDAが過半数議席を獲得し，BJPのナレンドラ・モーディーが首相に就任した。本稿では，この選挙結果を概観したうえで，分析を行う。有権者の関心事項は，かつては社会主義イデオロギーや社会主義型社会の建設といったイデオロギーであったが，インド経済の発展に伴い，汚職対策へと変化した。政党も有権者の関心事項の変化に対応する形で，その性格を変容させた。

キーワード：インド，連邦下院議員総選挙，国民会議派，UPA，BJP，NDA

1．はじめに [1]

わが国では，近年，インドについての関心が急速に高まっている。インドに進出する企業は優に1000社を超え，今後，経済を中心として，日印関係が深まっていくと思われる。

本年（2014年）8月から9月にかけて，ナレンドラ・モーディー首相が来日し，経済のみならず，政治，文化，さらには安全保障分野でも日印関係を深めていくことで日本側と意見の一致を見た [2]。

愛知県とのつながりについていえば，現在，インドには愛知県内64社が98拠点に進出しており，大村秀章県知事は，訪日中のモーディー首相に表敬訪問を行った [3]。

モーディー首相は，訪日に先立つ8月28日に，自身のツイッター（@narendramodi）で，日本語で次のようにツイート（発言）した。

「私は8月30日から日本を訪問する。印日関係を強化するこの訪問を，とても楽しみにしている。」

「この訪日は，私にとって，インド亜大陸以外で初めての二国間訪問となる。当初は7月上旬を予定していたが，議会の都合で不可能になった。」

「私はこの訪問を，日本との関係を新たなレベルへと高め，様々な分野における協力を増進する機会と見ている。」

「東京と京都を訪ね，学生，政治指導者，企業幹部など，日本社会のあらゆる層の人々と交流する。」

「州首相時代に日本を訪問したが，とても温かい思い出だ。もてなしの心と，協力の幅広い可能性が，深く印象に残った。」

「日本人の持つイノベーションの規模と高い精密性は賞賛に値する。印日両国は互いから多くを学ぶことができる。」

「私が特に心待ちにしているのは，安倍首相にお会いすることだ。私は彼のリーダーシップを深く尊敬しており，これまでの面会を通じて温かな関係を享受している。」

「日本のインドとの友情は時の試練を経てなお続いている。われわれ二国は，世界の平和と繁栄の増進に傾倒する。活気に満ちた民主主義国家である。」

しかしながら，モーディー政権がどのように誕生したのかについては，あまり知られていない。そこで本稿では，モーディー政権が誕生した契機となった2014年4月から5月にかけて行われた連邦議会総選挙について，概括し，その特徴を考察したい。

2．インドの連邦議会制度と選挙制度

まず初めに，インドの議会制度を概観しておく。インドは，中央政府と州政府からなる連邦制を取っており，中央政府に連邦議会が，州政府に州議会がそれぞれ設置されている。連邦議会は，連邦上院（Rajya Sabha）と連邦下院（Lok Sabha）からなる二院制を取っている。連邦上院と連邦下院の関係は，わが国の参議院と衆議院の関係に似ており，政治的に見ると，連邦下院が重要であ

る。このうち，連邦上院は，245 議席からなり，主に州議会から選出される間接選挙によって議員が選ばれる。連邦下院は，545 議席からなり，単純小選挙区制に基づく直接選挙によって議員が選ばれる。連邦下院の選挙には，議員全員を選ぶ総選挙（general election）と，欠員補充のために行われる選挙（by-election）の二種類がある。本稿で考察の対象とするのは，総選挙である。

3. 第 16 回連邦下院総選挙

まず初めに，第 16 回連邦下院総選挙の結果を概観しておきたい。

連邦下院の総選挙は，これまで 15 回実施されており，今回行われたのは 16 回目にあたる。投票は，2004 年の第14回総選挙から押しボタン式の電子投票が導入されている。18 歳以上の男女が有権者である。なお，被選挙権は，25 歳以上の男女が持つ。有権者数は，8 億 1450 万人 (4) であり，このうち 2310 万人が 18 から 19 歳である。投票率は，66.38% (5) で，過去最高を記録している。投票所は，全国 93 万か所に設けられ，187 万 8306 台の電子投票機が設置された。有権者数が多く，国土面積も広いため，投票は，合計 9 回 (6) に分けて投票が行われ，5 月 16 日に全国一斉に開票作業が行われた。なお，投票期間中，メディアは出口調査などの取材は行うが，選挙結果の予測記事は報道しない。予測記事によって，有権者の投票行動が影響を受けることを避けるための自主規制である。

政党別の開票結果を次の図 (7) で示す。

政党名	政党名の略称	得票数	得票の割合	獲得議席数	獲得議席の割合	前回獲得議席数
Bharatiya Janata Party	BJP	171,657,549	31.00%	282	51.90%	117
Indian National Congress	INC	106,938,242	19.30%	44	8.10%	206
All India Anna Dravida Munnetra Kazhagam	ADMK	18,115,825	3.30%	37	6.80%	9
All India Trinamool Congress	AITC	21,259,684	3.80%	34	6.30%	19
Biju Janata Dal	BJD	9,491,497	1.70%	20	3.70%	14
Shiv Sena	SHS	10,262,982	1.90%	18	3.30%	11
Telugu Desam Party	TDP	14,094,545	2.50%	16	2.90%	6
Telangana Rashtra Samithi	TRS	6,736,490	1.20%	11	2.00%	2
Communist Party of India (Marxist)	CPM	17,986,773	3.20%	9	1.70%	15
YSR Congress Party	YSRCP	13,991,280	2.50%	9	1.70%	2
Nationalist Congress Party	NCP	8,635,554	1.60%	6	1.10%	9
Lok Janshakti Party	LJP	2,295,929	0.40%	6	1.10%	
Samajwadi Party	SP	18,672,916	3.40%	5	0.90%	22
Aam Aadmi Party	AAP	11,325,635	2.00%	4	0.70%	0
Rashtriya Janata Dal	RJD	7,442,323	1.30%	4	0.70%	4
Shiromani Akali Dal	SAD	3,636,148	0.70%	4	0.70%	4
All India United Democratic Front	AIUDF	2,333,040	0.40%	3	0.60%	1
Rashtriya Lok Samata Party	RLSP	1,078,473	0.20%	3	0.60%	
Janata Dal (United)	JD(U)	5,992,196	1.1%	2	0.40%	20
Janata Dal (Secular)	JS(S)	3,731,481	0.70%	2	0.40%	1
Indian National Lok Dal	INLD	2,799,899	0.50%	2	0.40%	
Jharkhand Mukti Morcha	JMM	1,637,990	0.30%	2	0.40%	
Indian Union Muslim League	IUML	1,100,096	0.20%	2	0.40%	2
Apna Dal	AD	821,820	0.10%	2	0.40%	
Communist Party of India	CPI	4,327,297	0.80%	1	0.20%	4
Pattali Makkal Katchi	PMK	1,827,566	0.30%	1	0.20%	
Revolutionary Socialist Party	RSP	1,666,380	0.30%	1	0.20%	2
Swabhimani Paksha	SWP	1,105,073	0.20%	1	0.20%	1
Naga People's Front	NPF	994,505	0.20%	1	0.20%	1
Bahujan Samaj Party	BSP	22,946,182	4,10%	0	0.00%	21
Dravida Munnetra Kazhagam	DMK	9,636,430	1.70%	0	0.00%	18
Desiya Murpokku Dravida Kazhagam	DMDK	2,079,392	0.40%	0	0.00%	
Jharkhand Vikas Morcha	JVM	1,579,772	0.30%	0	0.00%	2
Marumalarchi Dravida Munnetra Kazhagam	MDMK	1,417,535	0.40%	0	0.00%	1
All India Forward Bloc	AIFB	1,211,418	0.20%	0	0.00%	2
Communist Party of India (Marxist-Leninist) Liberation	CPI(ML)(L)	1,007,274	0.20%	0	0.00%	
Bahujan Mukti Party	BMP	785,358	0.10%	0	0.00%	
Independent	IND	16,743,719	3.00%	3	0.60%	
Others				8	1.40%	
None of the above	NOTA	6,000,197	1.10%	0	0.00%	
Total Polled				543		516

得票率が31パーセントのBJP（Bharatiya Janta Party，インド人民党）が，総議席数の51パーセントを占める282議席を獲得し，得票率が19パーセントのインド国民会議派（以下，会議派と略称）が，総議席数の8パーセントの44議席しか得ることができなかったのは，選挙制度が単純小選挙区制であるためである。単純小選挙区制の場合，いわゆる死に票が出るが，今のところ，インドではこの選挙制度自体について否定的な見解が出されることはほとんどない。

4．政党と党派

インドでは，1990年代以降，特定の政党が単独で政権を樹立するのではなく，様々な政党と党派を組織して政権を樹立することが一般的になった。現在，主な党派として，NDA（National Democratic Alliance）とUPA（United Progressive Alliance）がある。

NDAは，1998年にBJP [8] が中心となって結成された党派である。BJPは，ヒンディー語で「インド人民党」を意味するが，決して社会主義や共産主義的イデオロギーに基づく政党ではない。その前身となった社会奉仕団体RSS（Rasytriya Swayansevak Sangh，ヒンディー語で「民族奉仕団」を意味する）がヒンドゥー教という宗教色を強く帯びていたことからも明らかなように，ヒンドゥー教という宗教色を当初は前面に打ち出していた。ただ，BJPは，宗教政党というわけではなく，その基本的性格を1980年の成立時から今日に至るまで少しづつ変化させてきた。すなわち，1980年の成立時から1998年ごろまでは，ヒンドゥーの宗教色が極めて強いヒンドゥットバ（Hindutva）の色彩を色濃く帯びていた。しかしながら，インドの政治が一つの政党が政権を担う単独政党制ではなく，複数の政党が党派を構成して政権を担う連立政党制が定着する1998年ごろから，ヒンドゥットバの色彩を薄くするようになった。そうしなければ，宗教色を前面に打ち出しているのであれば，様々な政党の協力を得て党派を結成することが困難になったからである。今日のBJPは，政教一致の宗教国家を目指しているわけではない。あくまでもセキュラリズム（世俗主義）の枠組みの中で国家建設を目指しているのである。

そして，NDAは，BJPを中核とした党派ではあるが，中央集権的な政治団体や政治組織ではなく，NDAを構成する各政党の指導者が集まって，選挙戦略を決定する組織であり，緩やかな連合体である。選挙制度が単純小選挙区制である以上，一つの選挙区に多数の政党から候補者が出馬した場合，いわば「同士討ち」となることがあるため，それを防ぐための工夫ともいえる。

UPAは，2004年に行われた第14回連邦下院総選挙の結果を受けて，会議派が中心となって結成された党派である。この総選挙では，選挙が実施された543議席中，BJPは138議席，会議派は145議席を獲得した。そしてBJPを中心とするNDAは181議席を確保し，比較第一党派となったことから，これに対抗すべく，会議派はUPAを結成し，UPAとして218議席を確保した。結果として，会議派を中心とするUPA政権が誕生した。そして，NDAのアタル・ビハーリー・バージュペーイー政権が下野し，会議派のマンモーハン・シン政権が成立した。そして，マンモーハン・シン政権は，経済重視の政策をとり，インド経済は急速に発展したのであった。

UPAは，NDAと同様に中央集権的な政治団体や政治組織ではなく，選挙戦略を策定する緩やかな連合体である。

党派については，メリットとデメリット双方がある。メリットとしては，中心となって党派を構成する政党が，コミュナル色，特に宗教色を極端に強く打ち出すことが難しくなることを挙げることができる。宗教，言語，慣習などの点で多様性に富んだインド社会では，特定の社会集団（コミュニティー）に有利なコミュナル色の強い政党が単独政権を樹立すると，コミュナル問題が生じるが，党派を構成することによって，たとえコミュナル色の強い政党であっても，コミュナル色を弱めざるを得なくなる。例えば，1998年ごろを転換点として，BJPはコミュナル色をイデオロギー面ではともかく，実際の政策面では弱めていった。

他方，デメリットとしては，党派からの離脱や加入が多く見受けられ，政権基盤が安定しないことを指摘できる。これは，比較的規模の小さい政党に見受けられる。

具体的には，まず，パンジャーブのシク政党であるアカーリー・ダルを挙げることができる。アカーリー・ダルは，パンジャーブのシクを支持基盤としながらも，NDAの一翼を担っている。これは，アカーリー・ダルは単独ではその政治的主張を実現することは困難であるものの，UPAあるいはNDAに加わることで，その政治的主張を実現することを狙ったものであった。アカーリー・ダルは，会議派との関係が必ずしも良くないことから，BJPに接近した。他方，BJPとしても，アカーリー・ダルを自らの陣営に引き寄せることによって，そのヒンドゥットバを少なくとも表面的には弱めることができる。

党派をしばしば変更することが顕著なのは，タミル・ナードゥ州に支持基盤を置くDMK（Dravida Munnetra Kazhagam，ドラビダ進歩同盟）である。DMKは，2004年に党派をNDAからUPAに変更した。しかしながら，

2012年に，スリランカにおける人権問題を取り扱った国連人権理事会決議にタミル人非難が含まれており，インド政府がこの決議に賛成したため，UPAを離脱した。

このように，党派を形成することには，メリットとデメリットの双方があり，良し悪しを一概に結論付けることはできない。

なお，第16回連邦下院総選挙におけるNDAとUPAの党派別獲得議席数を，整理すると，次のようになる[(9)]。

NDAの獲得議席数

政党名	獲得議席数	政党の種別
Bharatiya Janata Party	282	National Party
Shiv Sena	18	Maharashtra
Telugu Desam Party	16	Andhra Pradesh
Lok Janshakti Party	6	Bihar
Shiromani Akali Dal	4	Punjab
Rashtriya Lok Samata Party	3	Bihar
Apna Dal	2	Uttar Pradesh
Naga People's Front	1	Nagaland
National People's Party	1	Meghalaya
Swabhimani Paksha	1	Maharashtra
Pattali Makkal Katchi	1	Tamil Nadu
All India N.R. Congress	1	Puducherry
Mizo National Front	0	Mizoram
Republican Party of India (Athvale)	0	Maharashtra
Rashtriya Samaj Paksha	0	Maharashtra
Haryana Janhit Congress	0	Haryana
Desiya Murpokku Dravida Kazhagam	0	Tamil Nadu
Marumalarchi Dravida Munnetra Kazhagam	0	Tamil Nadu
Kongunadu Makkal Desia Katchi	0	Tamil Nadu
Indhiya Jananayaga Katchi	0	Tamil Nadu
New Justice Party	0	Tamil Nadu
Jana Sena Party	0	Andhra Pradesh
Gorkha Janmukti Morcha	0	West Bengal
Kerala Congress (Nationalist)	0	Kerala
Revolutionary Socialist Party (Bolshevik)	0	Kerala
Maharashtrawadi Gomantak Party	0	Goa
Goa Vikas Party	0	Goa
North-East Regional Political Front	0	North-East
Manipur Peoples Party	0	Manipur
総議席数	336	

UPAの獲得議席数

政党名	獲得議席数	政党の種別
Indian National Congress	44	National Party
Nationalist Congress Party	6	National Party
Rashtriya Lok Dal	0	Uttar Pradesh
Rashtriya Janata Dal	4	Bihar
Jammu & Kashmir National Conference	0	Jammu and Kashmir
Indian Union Muslim League	2	Kerala
Kerala Congress (Mani)	1	Kerala
Mahan Dal	0	Uttar Pradesh
Jharkhand Mukti Morcha	2	Jharkhand
Socialist Janata (Democratic)	0	Kerala
Revolutionary Socialist Party (Rebel)*	1	Kerala
Peace Party of India	0	Uttar Pradesh
総議席数	60	

5. 第16回連邦下院総選挙におけるBJPと会議派のマニフェスト

次に，今回の総選挙におけるBJPと会議派のマニフェストを見ていきたい。

まず，BJPのマニフェスト(10)であるが，大別して次の4点からなっている。

第一は，物価高対策である。経済成長に伴って，物価が上昇している現状を踏まえ，物価高への対策を第一に打ち出した。具体的には，物価高に伴って，主として食糧に代表される日常生活必需品の闇市場が，都市部，農村部を問わず，形成されてきたが，これらの闇市場の取り締まりを掲げた。そして，物価安定基金（Price Stabilization Fund）の創設をも公約した。

第二は，汚職対策である。インドは，1947年のインド・パキスタン分離独立以来，国営企業を中心とした経済政策を採ってきた。1991年からの経済自由化に伴い，国営企業の民営化が進展していたが，それでも重工業を中心とする基幹産業は，依然として国営企業が担っており，汚職が社会問題となってきた。そこで，汚職対策を掲げたのである。具体的には，公務員や国営企業の関係者による口利き防止対策として，電子政府の技術開発を促進することを公約した。電子政府が実現すれば，国民が直接行政手続きを行うことも可能となる。要は，行政手続に，公務員や国営企業の関係者を介在させないことを意図したのである。わが国の場合，電子政府の導入は，汚職対策ではなく，行政手続きの簡素化・合理化を目的として行われており，この点で，インドと日本では，電子政府の導入の目的が大きく異なっている。さらには，税制の簡素化も公約として掲げた。

第三は，IT産業の育成である。具体的には，ブロードバンド・インターネットの整備推進，農村部におけるIT産業の育成，オンライン・バンキングの普及・促進による新たな雇用機会の創出が公約として掲げられた。

第四は，説明責任のある行政（Accountable Administration）である。インドにおいても，行政に国民に対する説明責任が求められるようになったことがこの公約の背景となっている。具体的には，国民を中心とした（People-centric）行政，政策の確実な実行（Policy driven），期限厳守（Time bound delivery），最小限の政府で最大限のガバナンス（Minimum Government, Maximum Governance）がマニフェストに掲げられた。

なお，BJPは，アヨーディア・ラーマ寺院の再建や統一民法典の制定といったコミュナリズムを刺激する政策の実行は，継続して掲げはするものの，かつてほど前面に打ち出さなかった。これは，もしこうしたコミュナリズムを刺激する政策を前面に掲げた場合，例えば，アカーリー・ダルの反発を招き，NDAの結束力にマイナスの影響をもたらすことが懸念されたからであった。

次に，会議派のマニフェスト(11)を検討する。会議派は，マニフェストで国民皆が享受できる成長（inclusive growth）を前面に打ち出した。具体的には，国民の社会経済的権利の保障，公衆衛生にGDPの3パーセントを再出する，今後3年以内に8パーセントの製材成長率を達成する，労働者の権利擁護，指定カースト･指定部族，少数者（マイノリティー），女性の権利擁護，農村開発，パンチャーヤト・ラージの重視，汚職のない社会の創出などである。さらに，「世俗主義的リベラルな民族主義（Secular Liberal Nationalism）対偏狭なコミュナリズム（Narrow-minded Communalism）」，「国民皆が享受できる民主主義（Inclusive Democracy）対国民を分断する権威主義（Divisive Authoritarianism）」もスローガンに掲げ，BJPは偏狭なコミュナリズムと国民を分断する権威主義であるとして，BJPとの対決姿勢を鮮明にし，有権者に，会議派かBJPかという選択を求めた。

会議派のマニフェストの特色として，経済成長を最優先課題に位置付けたことがあげられる。これは，会議派は，2004年にマンモーハン・シン政権が成立して以来，経済成長を第一に掲げ，10年間で飛躍的な経済成長を成し遂げたという実績によるところが大きい。すなわち，実績に裏打ちされた経済成長の継続を訴えたのであった。ただし，汚職対策については，BJPと比べると，マニフェストでの優先順位はやや低く，農村開発や労働組合を重視する伝統的な政策も打ち出した。

6. UPA，NDA以外の政党：CPI，CPI（M），AAP

ところで，インド現代史を振り返ると，CPI（Communist Party of India，インド共産党）とCPI（M）（Communist Party of India（Marxist），インド共産党（マルクス主義派））が，民族運動期から独立後の国家建設，特に経済建設で果たした役割を無視することはできない。州レベルでは，ケーララ州や西ベンガル州でCPIやCPI（M）は州政権を樹立したこともあった。これらの諸政党は，今回の選挙でどのようなマニフェストを掲げ，どれだけ議席を獲得したのであろうか。

CPI，CPI（M）は，ともに，「会議派拒絶，BJP打倒（Reject Congress, Defeat BJP）」をマニフェスト(12)に掲げ，経済成長を追求しながらも，経済的な格差の是正を訴えた。マニフェストの上では，CPIとCPI（M）の意見の相違は，一見，それほど多くはない。しかし，CPI

は，テレンガーナーのアーンドラ・プラデーシュ州からの分離に賛成しているのに対して，CPI（M）は，テレンガーナーの同州からの分離に反対の立場をとった。結果として，CPI は 1 議席（前回は 4 議席）を，CPI（M）は 9 議席（前回は 15 議席）を獲得した。両党ともに，獲得議席数を総選挙の都度減らしており，人々の支持が離れつつあることが明らかになった。

今回の総選挙で，注目されたのは，AAP（Aam Admi Party，庶民党）である。AAP は，2012 年 11 月 26 日に，オービンド・ケジリワール（Arvind Kejriwal）とアンナ・ハザレ（Anna Hazare）が中心となり，反汚職を掲げて結成した政党である。AAP は，2013 年のデリー特別市議会選挙で，70 議席中 28 議席を獲得した。過半数議席を獲得した政党がなかったため，AAP は 8 議席を獲得した会議派の支持を得て，市政権を樹立し，オービンド・ケジリワールがデリー市長に就任した。今回の総選挙では，汚職対策が争点の一つになったことから，AAP が注目されるようになったのである。AAP は，全国で合計 434 人の独自候補者を擁立し，結局，パンジャーブで 4 議席を獲得した。AAP は，今回の総選挙では BJP や会議派といった既成政党の支持基盤を切り崩すことはできなかったのである。

7. ナレンドラ・モーディー政権の成立

第 16 回連邦下院総選挙の結果を受けて，2014 年 5 月 26 日に NDA 政権，すなわちナレンドラ・モーディー政権が成立した。ナレンドラ・モーディーは，2001 ～ 2014 年にグジャラート州の州首相を務めており，RSS のメンバーであるものの，州首相在職中，グジャラートの経済成長を支えた。RSS のメンバーであると言っても，外国企業の誘致に積極的であり，決して外国企業を排斥する政策を取らなかった。

ナレンドラ・モーディー政権の政策の特徴としては，まず，対内政策面では，経済成長，特に，外国からの企業誘致に極めて積極的であることを指摘できる。また，州首相時代には，経済特区（Special Economic Zone）をグジャラート州に設置し，中国の経済特区を視察するために 4 回にわたって中国を訪問している [13]。

ただし，モーディー首相には，州首相在職中の 2002 年に，グジャラート州で発生したコミュナル暴動を扇動した疑いがあり，2005 年からアメリカはビザの発給を停止している。

次に，対外政策面では，インドの経済成長を最も重視している。マンモーハン・シン前政権がインド経済の成長を確固としたものとしたこともあり，経済成長重視の政策は継続されるものと思われる。また，モーディー政権は，SAARC（South Asian Association for Regional Cooperation，南アジア地域協力連合）を重視する政策も打ち出した。これは，地域的な経済協力を重視しているというよりは，インドの市場をインド一国から南アジア全体に拡大するための一つの方策と考えられる。対中国，対パキスタン政策も，敵対関係ではなく，穏健な関係の構築を目指しているが，これも，対中国，対パキスタン貿易の拡大を狙ったものであろう。

8. 小括

今回の連邦下院総選挙の結果から，以下の結論を導き出すことができよう。

まず第一は，社会主義型イデオロギーや，社会主義型社会の建設をスローガンに掲げる政党への支持が衰退していることである。有権者の関心は，社会主義型社会の構築ではなく，インドの経済的な発展にある。また，ヒンドゥットバへの支持も，かつてよりは薄まっている。対外政策の面でも，かつては，一例をあげると非同盟イデオロギーへの支持が有権者の間で根強く存在していた。しかしながら，インド市場の拡大という経済最優先の路線が有権者の支持を得るようになっている。また，農民組合や労働組合が持つ政治的影響力も低下している。これは，各政党のマニフェストにおいて，農民組合や労働組合重視の政策が謳われていないことから明らかである。

第二は，有権者の汚職対策への期待が増大していることである。反汚職を掲げる AAP は今回の総選挙では 4 議席を得るにとどまった。しかしながら，総選挙に先立つデリー特別市議会選挙では，第一党になり，AAP の市会議員がデリー市長に就任した。さらに，BJP や会議派といった既存の政党も，反汚職をマニフェストに掲げたのである。AAP についていえば，現在その影響力，支持基盤は都市部に限定されている。今後，農村部にまで支持基盤が拡大するかどうか，見極める必要があろう。

このように，有権者の関心は，かつては，社会主義型イデオロギーや社会主義型社会の建設にあった。後に，アヨーディア問題に代表されるコミュナル問題が注目されるようになると，世俗主義やヒンドゥットバに関心が移った。そして，インド経済が自由化され，経済が発展するようになると，インド経済をいかにして発展させるのかに関心が移った。そして，有権者が経済発展の恩恵を受けるようになると，公務員や国営企業の関係者の汚職対策に関心が移ったのである。政党の側も，有権者の

関心に合わせる形で，マニフェストを変化させ，同時に，政党の性格もイデオロギー重視から汚職対策へと変容させるに至ったのである。

注

(1) 本稿は，名城大学アジア研究センター主催研究会（2014年6月5日，於名城大学）における報告「世界最大の民主主義：インドの選挙」に基づきつつ，その後の日印関係の展開をも踏まえたものである。

(2)「日印安保連携を強化」，「日印首脳会談（社説）」（『中日新聞』，2014年9月2日）も参照。

(3)「来日中の印首相　知事が表敬訪問」（『中日新聞』，2014年9月3日）。この記事は，愛知県内版にのみ掲載されており，本稿執筆時点（2014年9月）においてインターネット等では検索できないことから，以下，全文を引用する。

来日中の印首相　知事が表敬訪問

大村秀章知事は2日，東京都内のホテルで，来日中のインドのモディ首相を表敬訪問した。面会は二年ぶりでモディ氏の首相就任後は初。インドには県内64社が98拠点に進出しており，今後も産業を通じて若者の交流を促進していくことなどを確認した。

訪問で大村知事は「愛知は製造業の一大集積地。インドは重要な事業拠点の一つ」とつながりの深さを強調。産業県として友好関係を強めていると説明し，県が奨学金を出す留学生制度でインドの学生が学んでいることにも触れた。インド訪問への意欲も示し「来年の早い時期に，中部経済界とともに伺いたい」と述べた。

モディ氏は「愛知の企業に多くのインド人学生を受け入れてほしい」と要望。「産業界の若者がより深く交流し，両国の懸け橋になってくれれば」と期待を寄せた。

モディ氏は，グジャラート州首相時代の2012年7月に名古屋市内で大村知事と会談。県内企業のインド進出への協力を要請していた。

(4) 以下，統計データの出所は，インドの選挙管理委員会の公式ウェブサイトによる。

(5) なお，前回第15回連邦下院総選挙の投票率は，59.7%であった。

(6) 第1回は4月7日，第2回は4月9日と11日，第3回は4月10日，第4回は4月12日，第5回は4月17日，第6回は4月24日，第7回は4月30日，第8回は5月7日，第9回は5月12日。

(7) インド選挙管理委員会のウェブサイト掲載データを基に，筆者作成。

(8) BJPの性格については，中村平治，「三輪博樹論文を読む」（『南アジア研究』第21号，228-231ページ，2009年。）も参照。本中村平治論文は，4ページと短いものであるが，南アジア現代史の潮流を実証的に踏まえており，現代インドの政治状況，特に，コミュナル問題を考えるうえで，極めて有用である。

(9) いずれもインド選挙管理委員会のウェブサイト掲載データを基に，筆者作成。

(10) BJPのウェブサイトも参照。マニフェストの全文がBJPのウェブサイトに掲載されている。

(11) 会議派のウェブサイトも参照。マニフェストの全文が会議派のウェブサイトに掲載されている。

(12) CPI，CPI（M）のウェブサイトも参照。CPI（M）については，ツイッター（@cpimspeak）でも積極的な情報を発信している。とりわけ，CPI（M）西ベンガル州委員会のツイッター（@CPIM_WESTBENGAL）は，ベンガル語で党の主張を表明し，ベンガル語で書かれた党の宣伝ポスターの画像も配信しており，貴重な第一次資料となっている

(13) *South China Morning Post*, May 16, 2014.

THE STUDY ON THE 16TH LOK SABHA GENERAL ELECTION IN INDIA

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Abstract

In India, the 16th Lok Sabha general election was held in April-May, 2014. The United Progressive Alliance was defeated. Most of it were the members of the Indian National Congress. The National Democratic Alliance won the election. Most of it were the members of the Bharatiya Janta Party. Narendra Modi was elected as the Prime Minister. In this article, the result of the election is analyzed. This analysis shows that the voters are interested in how to deal with corruption more than socialistic and ideological issues.

KEY WORDS : India, Lok Sabha general election, Indian National Congress, United Progressive Alliance, Bharatiya Janta Party, National Democratic Alliance

書評

Book Review

The Japanese Consumer: An Alternative Economic History Of Modern Japan

Penelope Francks
Cambridge (2009)
ISBN: 978-0521699327
249 pages

Author: Philip BEECH

As the sub-title suggests, *The Japanese Consumer: An Alternative Economic History of Modern Japan* is a study not of large scale supply side economics, but of the demand-side of Japan's economy.

The book is a focus on the growth of the Japanese economy over the last two centuries through a detailed analysis of consumption and the consumer.

Francks, a lecturer in Japanese history at the University of Leeds, traces the growth of consumption of firstly traditional Japanese goods – food, clothes and household accessories – in the great cities of Edo Period Japan: Edo, Osaka and Kyoto. She later looks at the influx of western goods in the Meiji Period, the period of mass consumption of electrical goods in the post-war economic miracle and the new "tribal" trends in the 21st century shopping meccas such as Harajuku and Akihabara in Tokyo.

Throughout the book, the author challenges the accepted notion of the ordinary Japanese as first and foremost a saver and a consumer of goods "simply necessary for survival in the short or long term" rather than an informed and discerning consumer of goods as they became available through the ages with the development of new technologies and the means of production.

The starting point of the study is the great cities of Edo, Osaka and Kyoto and the emergence of discriminating urban consumers directed and informed of new products by evermore sophisticated advertising techniques. Osaka became the main distribution center for a wide range of agricultural and manufactured goods destined for the households, families and servants of the bureaucrats of the Tokugawa government and the attendant feudal lords based in Edo under the system of *sankin kotai*.

The Edo Period saw the growth of large stores and shopping districts in what is now Tokyo as well as the development of entertainment areas for travelers and residents complete with kabuki theaters, inns, tea houses and restaurants. The growth of the Edo Period's great cities and castle towns had a stimulating effect on the rural elites in the countryside, who began to consume similar goods to those enjoyed by city dwellers.

Japan's opening to industrial, mass-produced Western products and new forms of communication (newspapers, railways) at the beginning of the Meiji Period spread new products more quickly throughout the country leading to an increase in permanent shops.

As a direct result, shopping as a leisure activity became the norm throughout Japan. A national diet of rice plus side dishes also became established at this time as eating habits became less regional over time.

The inter-war years saw the development of commuter suburbs, coffee shops, beer halls, hostess bars, department stores and mass advertising as more and more people left the countryside and flocked to urban areas for employment. Entertainments such as baseball, sumo and cinema appealed to this new urban influx of workers leading an increasingly industrialized lifestyle.

Francks sees the post-war economic miracle as driven not just by exports of cheap manufactured goods but also the growth of a massive domestic market as the new "electrical household" acquired TVs, radios, refrigerators, washing machines and cars. In cities, supermarkets and convenience stores began to appear. The former serving the housewife and the latter the returning salaryman or student.

The wealthy decades of consumption in the 1970's and 1980's spurred the growth of the advertising industry and extremely sophisticated product differentiation among producers and quality-consciousness among consumers.

Francks' book engagingly and entertainingly outlines the history of Japanese consumption patterns and fits them into the now globalized world of consumption that we all now inhabit.

会議論文

Conference Paper

FERTILITY BEHAVIOR AND ASSESSING THE POSITION OF TODD'S EMMANUEL IDEOLOGY IN SRI LANKAN CONTEXT

By Meewalaarachchi Mangalika Sriyani (PhD)

Abstract

When addressing the dilemma of new home economics and fertility change in Sri Lanka, we are inevitably confronted with a combination of institutional and human factors: Reflecting women's new role in the society and the domestic level. There are many avenues through which female autonomy may impinge on fertility and an economic calculus in fertility decision-making and the relative significance of "structural" and "cultural" content in characterizing the empowerment of women in both developed and developing countries. Sri Lankan women enjoy comparatively a higher level of quality of living compared to other south Asian counterparts and total fertility rate (TFR) in 2013 as 2,15 (CIA, 2014) reflects one of the biggest issues currently plaguing many advanced industrialized countries which is the persistence of below-replacement fertility rates (2.1 for developed and globally 2.33).

On the other hand, Emmanuel Todd presents an extremely powerful interpretation for the rise of ideologies in the modern age with the presentation of the societal modernization and cultural change, and shows further that family structure leads to the position or disposition of women at home and in the society. He argues that women's position today is impacted by the cultural ideology in the process of modernization.

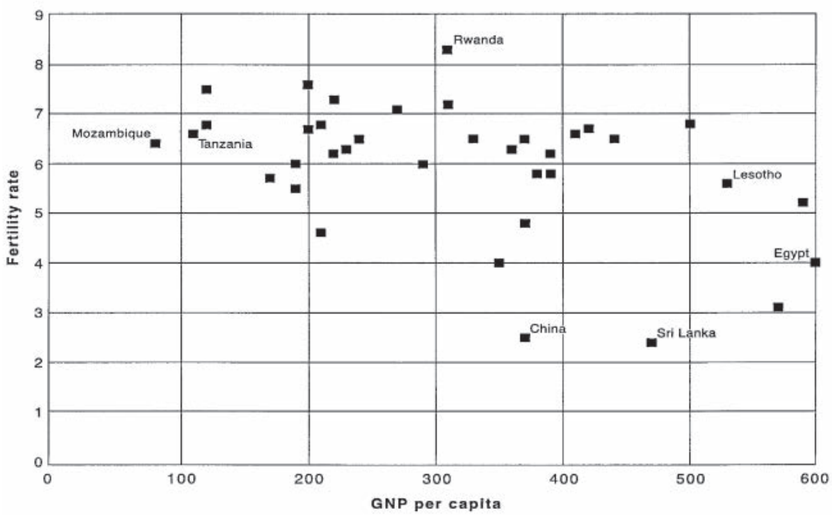
In the light of the above, this paper explores the position in Sri Lankan women today related to the proximate determinants of the current fertility status and the ways in which Todd's ideology can explain the fundamental causes underlying the fertility behavior in Sri Lankan context.

KEY WORDS : Fertility, Todd Emmanuel, and Women Empowerment.

1. Introduction

"Ireland of Asia", the name was given to Sri Lanka by Krik (1969) due to the delay in marriage and its impact on fertility. In fact, World Bank (1992) mentioned that Sri Lanka had a record in 1990 for lowest fertility rate among a group of 43 developing countries in the world and it is lower than some other countries those have higher income level than Sri Lanka, that was GNP Per Capita $ 470. This is shown in Figure 1

Figure 1: GNP Per Capita and Fertility of Low-Income Countries



Source: World Bank (1992)

Fertility decline with a rise in life expectancy is a universal feature when a country goes up in the process of development and every industrialized county has experienced a demographic transition from high to low fertility.

The total fertility rate (TFR) defined as the average number of children to be born to a woman who goes through her reproductive age according to the age-specific birth rates. When we look at Asia, the fertility trend has changed dramatically. Sri Lankan women enjoy comparatively a higher level of quality of living compared to other south Asian countries and total fertility rate (TFR) in 2013 as 2,15 (CIA, 2014) reflects one of the biggest issues currently plaguing many advanced industrialized countries which is the persistence of below-replacement fertility rates. (2.1 for developed and taken globally, 2.33).

On the other hand, Emmanuel Todd presents an extremely powerful interpretation for the rise of ideologies in the modern age with the presentation of the societal modernization and cultural change, and shows further that the types of family structure lead to the declining fertility in the development process. In the light of the above, this paper explores the position in Sri Lankan women today related to the proximate determinants of the current fertility status and the ways in which Todd's ideology can explain the fundamental causes underlying the fertility behavior in Sri Lankan context.

The rest of the paper is organized as follows. Section 2 explains the theoretical consideration and empirical backdrops on modernization and family dynamics related to fertility. Section 3 presents Todd's Emmanuel ideology and fertility behavior and its approach to the Sri Lankan context. Discussions on determinants of fertility differentials in Sri Lanka are presented in section 4. Finally section 5 concludes.

2. Theoretical Consideration and Empirical Backdrops on Modernization and Family Dynamics Related to Fertility

Gender equality is measured in the core institutional factors; such as level of educational attainment, economic participation and opportunity, health and political empowerment. These factors in turn enable or constrain women and couples to combine work and family activities, and hence influence the timing of childbearing. Chesnais (1996) notes, "in the world at large, where women's status is low, fertility is high. But in advanced industrial societies, and, by the same token, in societies where fertility is below replacement, this generalization no long holds"(p.738).

The classic demographic transition theory explains that the modernization process including industrialization, urbanization and secularization first brings about mortality decline followed by fertility decline (Shigemi, 2007). Moreover this theory postulates that a long-run equilibrium in which fertility rates are similar to mortality rates and population growth is zero. The rational choice framework associated with neoclassical economics provides a compelling explanation for the universal relationship between industrialization and lower fertility, but does not explain fertility variation.

The theory of a 'second demographic transition' is formulated by European demographers seeks to explain this inconsistency, but does not appear to fit the experiences of Sri Lanka or other Asian countries very well. Sri Lankan women have shown a rapid demographic transition from high to low fertility since 1950s with rise in literacy rates, which has shown averagely over developing country contexts.

How can Economic theories explain declining fertility with increased women's educational attainment in Sri Lanka?

"Women's education is one of the most important determinants of the timing of first births, as well as for overall fertility levels" (Martin-Garcia, 2006). The level of formal education has been hypothesized to impact on a variety of aspects: individual income, the ability to access of social distinctiveness, the credentials to access the labor market, or capacity for a lifetime of learning (Bourdieu, 1977; Becker, 1981; Caldwell, 1982;) as cited by Martin-Garcia (2006). "Education is often seen as a means to accumulating human capital, which can later be used in the market-place and this aspect is pushed one step further by the New Home Economics approaches (Martin-Garcia, 2006, p.1).

Growing economic independence of women as an out-come of better education and improved career opportunities, leads to decline in fertility, since a growth in the earning power of women raises the relative cost of children (Becker, 1981).

Theories like neo-classical economics do not hypothesize "a reduction of fertility as a result of a higher accumulation of human capital, but rather a postponement of the onset of fertility, if the lifetime potential earning profiles of women increase steeply" (Ermisch, 1990; Ermisch and Francesconi, 1999) as cited by Martin-Garcia, 2006,p.1)

According to the diffusion model, "the spread of new ideas and behaviors is also responsible for fertility decline. It is possible that with social interactions and the consequent transmission of information, new ideas, such as regulating fertility and use of modern contraceptive methods, becomes accepted as a social norm" (De Silva, p.3 & 4)

Rindfuss et al. (2003) as cited by Vos (2008) find that the relationship between fertility rates and female labor force participation varies across countries, with those countries that minimize the incompatibility between mother and work roles. Scandinavian countries can be given as best examples since well-fare model in those countries protects the women who want to fill both roles being more likely to see increasing numbers of working mothers. Women in those countries can more easily combine these two roles, than countries those do little to minimize the role incompatibility.

Although gender and the family dimensions which were conspicuously absent from earlier welfare policy regime analyses of the 1980s (Orloff, 1993) as cited by Vos, (2008,p.5) current theorizing about the welfare state recognizes the significance of relationships between states, markets and families, and the impact of these on society (Esping-Andersen, 1999; Gornick and Meyers, 2003)as cited by Vos (2008, p. 5).

Examining fertility rates have yielded some clarification on the relationship between levels of religiosity and fertility. Some countries with higher levels of religiosity and traditional (Catholic) family values, e.g. Spain and Italy, are in fact among the lowest fertility group in Europe (Billari and Kohler, 2004) as cited by Vos (2008)

3. Explanation of Toods Emmanuel Development Ideology on Fertility Transition In Sri Lanka

Emmanuel Todd presents an extremely powerful interpretation for the rise of ideologies in the modern age with the presentation of the societal modernization and cultural change. In his books *The Causes of Progress: Culture Authority And Change* (1987) *and The Explanation of Ideology* (1985) he explaines the ways in which the family structure leads to the position or disposition of women at home and the society. He argues that women's position today is impacted by the cultural ideology in the process of modernization. He notes the modernization process took place in different countries in a different way, in a different level. In this section, I would like to explain,Todd´s explanation on the cultural ideology in the process of development related to the fertility transition in Sri Lanka. Briefly, his books are a systematic historical atlas of 1500-1990 looking at development across the world (Willy,2013). Todd identifies as the key markers of modernity: Therefore Todd's system is a global outlook and he mainly focuses on literacy, contraception, industrialization and de-Christianization (decline of religious practice and/or belief ideology (as expressed through revolutions and elections). In Todd's modernization theory, he attempts to systematically correlate family structure, literacy, godlessness and political ideology, as:

Family structure + Literacy + Godlessness = Political Ideology

Todd then, attempts to systematically correlate this ideology again with birth control,and as a result, Todd posits the following new equation. He belives that decline of religious thoughts leads to higher birth control in a society.

Literacy + Dechristianization = Birth Control

- Family systems and agrarian systems
- Modernization phases (literacy, industrialization, de-Christianization, contraception)
- Ideology (nationalism, socialism, religious conservatism) (Willy,2013)

According to Todd's theory on authority and inequality, countries are characterized: These principles of discrimination and hierarchy are projected both onto domestic and international politics. Those types have impacts on women's autonomy at home and the society. In Emmanuel Todd's *Invention de l'Europe,* four premier European family types are identified according to two major criteria: an individual freedom or under the authority of his parents in adulthood, and in terms of inheritance (Todd

1987). Further he categorizes all countries in a world map according to his classification. (Appendix 1 shows Todd's world classification on family types throughout the world) .

These categories are: the *"absolute nuclear" family,* liberal and non-egalitarian (that is, indifferent to equality), the *"egalitarian nuclear" family,* liberal and egalitarian; children are completely free upon adulthood, founding independent families and inheritance is equally distributed, the *"stem" family,* authoritarian and non-egalitarian, several generations may live under one roof, and the first-born child, mainly a boy will inherit the entirety of property and family headship (and thus perpetuate the family line). Other children typically leave the home to get married or become priests/soldiers. The fourth is the *"communitarian" family,* authoritarian and equal. Several generations may live under the same roof until the eldest die and the inheritance is divided equally.

Todd´s system can be applied in a global scale and sees the dynamic interaction of different but mutually influencing masses of humanity and nations. Then what would be the relationship to Sri Lanka ? Sri Lanka is categorized under the asymmetrical community family structure..

Much literature explains that education and fertility are interlinked and age at marriage matters. Todd in his book, *The Causes of Progress* (1987) shows that the correlation coefficients that associate ages at marriage with literacy rates, distinguishing between the two sexes, emphasizes women's specific role in the process of cultural development. "The correlation between female age at marriage and male literacy rate (+ 0.79), which is markedly higher than the coefficient of correlation between male age at marriage and male literacy rate (+ 0.695), young people in the all the cases". (p. 15).This is explained in the Table 1.

Table 1: Coefficient Correlations Between Age At Marriage And Literacy Rates

Age at women at marriage and female literacy	Plus 0.83
Age at women at marriage and male literacy	0.79
Age at men at marriage and male literacy	0.65
Age at men at marriage and female literacy	0.65

Source: Todd, 1987

"Coefficients are calculated for 52 countries. Literacy rates are for young people who were between 15 and 20 years old around 1970. Ages at marriage are for around 1970" (Todd, 1987,p. 16).

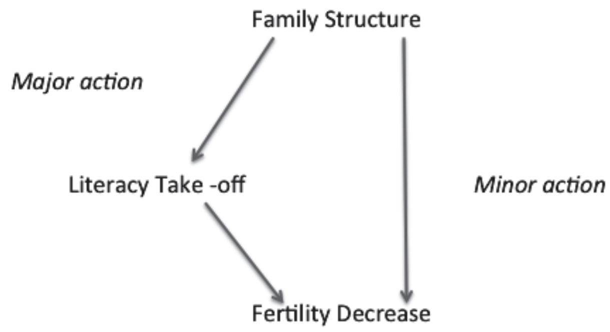
During the 1970s women married in Japan, Singapore, the Philippines and Sri Lanka at between 24 and 25 years of age, on average. Nevertheless this value is much less than in northern Europe, there are ages of women at marriage were registered as between 26 and 28 years (Todd, 1987).

Todd describes the need for ideology and religion in order to explain the fertility. He describes that when family takes actions or decisions far from religion then its leads to a better position for women in the society and the home.

He writes "after 1850 a Nordic-Central European group emerges, noteworthy for having literacy rates of over 70 per cent (counting both sexes together) and average ages for women at marriage of over 27 years. This group comprises Scandinavia, Germany Switzerland and the Netherlands". He explains further. "On family structures, a link exists between certain types of family structure and the spread of mass literacy works well for the continent of Europe, including Norway, Sweden, all exhibit the same sort of family structure, that is one simultaneously bilateral and vertical" (Todd 1987, p.36-37, 43).

Todd argues that mass literacy, in freeing the individual from the Priesthood and allowing for mass communication, "triggers" political revolution and the "age of ideology." Ideological fervor is usually contained or limited so long as people remain practicing Christians: Life is brutish and short, but dreams of a better world are relegated to a heavenly afterlife. But as soon as people are "godless and literate," there is upheaval (Willy, 2013). Todd's explanation on Literacy and fertility can be shown as follows. He explains that level of literary has more power to make fertility decisions than the types of the family structure.

Figure: 2 Todd's Explanation on Literacy and Fertility



Source : Todd (1987,p.155)

Todd classifies 3 levels of feminism within a family system as explained using the usual anthropological categories of patrilinearlity, and matrilineality. The definition is most widely accepted on the criterion of kinship. According to Todd it considers a family system to be patrilineal if it confers a pre-eminent role in social life on the kin of the husband , bilateral if it gives equal roles to the kin of the husband and the wife, and matrilineal if it exalts the kin of the wife. He further explains in this case patrilineal connotes a system in which the son is considered to be simply the genetic product of his father, bilateral one is which he is considered to have been made by his parents, and matrilineal in that it takes the mother alone to be responsible for his existence (1987, p. 18). This typology and development potential can be explained as follows.

Table 2: The Family Typology and Development Potential

Status of women	Degree of authority	
	–non vertically	-vertically
Patrilinearlity	patrilineal non-vertical type (medium)	Patrilineal Vertical type um
Bilaterally	Bilateral non-vertical type (medium)	Bilateral vertical type (very strong)
matrilineal	Matrilineal Non-vertical type weak	Matrilineal vertical type

Source : Todd (1987)

4. Discussions on Determinants of Fertility Differentials in Sri Lanka

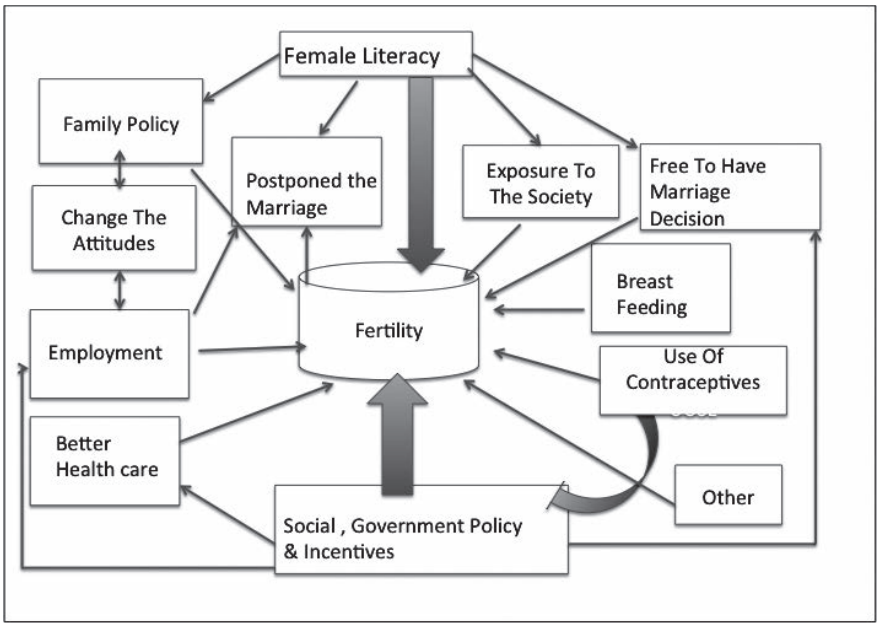
This section explains the determinants of the fertility behavior in Sri Lanka and discusses its relevance to Todd's development-ideology theory.

The following figure shows *a Schematic model* to decompose determinants of fertility in Sri Lanka. According to the figure, female literacy rates responsible for the core changes in the society, which governs the low fertility level. There are a number of arguments for increasing education level if Sri Lankan women might lead to childbearing delay. One of the most important factors involves balancing education and mother roles. Both are time-intensive, making it difficult to do them simultaneously. Sri Lankan women who desire high educational attainment levels are likely to postpone parent-hood as other countries do. Further, Higher-educated women are likely to have higher careers, or educated women simply treated as part of a dowry in the marrige system and further lead to higher rate of return in the employment sector and greater authority and autonomy in both society and family level. Moreover higher education leads to have own marrige decisions through the exposure to the soceity. Therefore, the increase in marriage age in Sri

Lanka can be governed by female education patterns basically. This argument is supported by most of the research findings in Sri Lanka, for example Anrudh (1981) concludes that female education is shown to be negative related to cumulative marital fertility in Sri Lanka. De Silva (1992) concludes that increases in the opportunity cost of having children through a narrowing of gender inequalities, especially through increasing female education and employment opportunities, may result in more autonomy for women, leading to further declines in wanted fertility in Sri Lanka.

John Caldwell,Indra Gjanayake *Et al* (1989) conclude in their research on *"impact of marriage delay on fertility decline"* that female education makes higher responsibility for delayed marriage in Sri Lanka and delayed marriage leads to low fertility. Also educated women have power to choose their marriage partner than less educated women. When we consider factors of religion and urbanization in Sri Lankan context, women who live in western province or having Buddhist background in their family background have higher chance to select their own partner. In Sri Lankan context this is called as *love marriage* since parents arranged marriages are called as proposal marriages. This argument is supported by Todd's ideology explained in the demographic transition. Clearly, urbanization, education, movement up the socioeconomic scale, being Sinhalese(either Buddhist or Christian), and the passage of time all tend to increase the proportion of love marriage¨ John Caldwell et al (1989, p. 4)

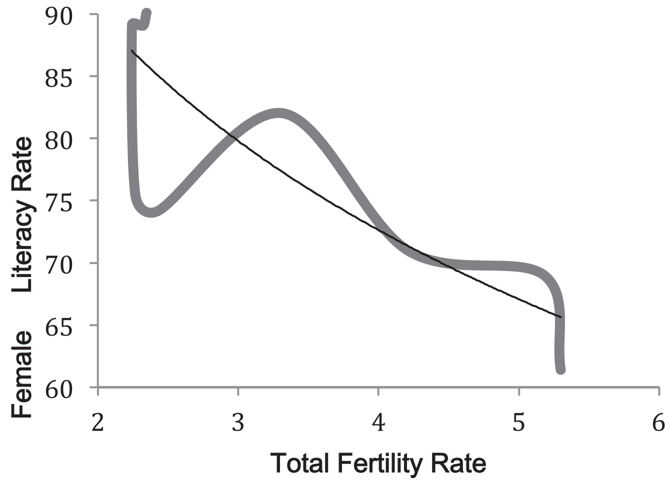
Figure 3: A Schematic Model To Decompose Determinants of Fertility in Sri Lanka



Source : Composed by the Author

Figure 4 shows the relationship of female literacy rates and the total fertility rates in the time period 1960-2014 in Sri Lanka and it has been negative. Rise in marriage age depends on variables such as duration of the school years and some other factors: such as female labor force participation etc. Mainly female literacy rate makes the foundation for all the positive factors those affect the decline the fertility level in Sri Lanka. Breast-feeding makes the pause between childbirthrths. Governement policy and incentives lead better health care in maternity clinics and so on.

Figure 4: Female Literacy Rate and The Total Fertility Rates In The Time Period 1960-2014 In Sri Lanka



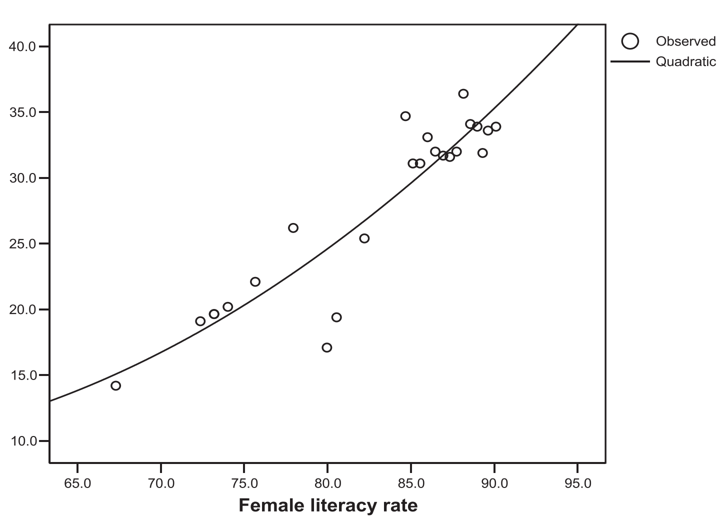
Source: Author Composed With World Bank Data

Women's labor force participation has been linked to the postponement of childbearing in several ways. Within the sociological literature the focus is on the incompatibility between caring for children and parents and those aspects are discussed in the theoretical section. The figure 5 explains the relationship of female force participation with the female literacy rates in Sri Lanka after 1971.It has shown a upward positive relationship.

In most developed countries, such as Scandinavian countries, there are policies and governement incentives that have been adapted explicitly to influence high fertility levels or designed to make it easier for mothers to be in the paid labor force, also there are a wide variety of policies and institutional arrangements in the educational system, (This is explained further by Tendo & Meewalaarachchi (2014) as labor market and housing market those likely inadvertently affect the timing of parenthood. For example, in Japan the 'new graduate recruitment system' has been the principal mechanism whereby young people find regular jobs in full-time basis, those offer fringe benefits and fall under the lifetime employment model (Inui, 2003).

Figure: 5 Female Labor Force Participation With Literacy Rates In Sri Lanka.

Female labour force Participation rate



Source: Meewalaarachchi (2008)

In contrast to some other countries, Sri Lanka has never had large proportions of women who remained childless throughout their lives, no higher records of pathological sterility. In the Schematic model these variables are categorized as other fators.

The efficient and reliable oral contraceptives, commonly known as 'the pills' were introduced by the national family planning program that was launched in late 1965.

This program had a big impact on the level of fertility prevailing in Sri Lanka. According to De Silva (1992) in Sri Lanka married women of reproductive ages rely on contraception with more than 62 per cent. This value is in 1987 one of the highest records in Asia, and it provides a rare opportunity to investigate this proposition with a longitudinal database.

5. Conclusion

Sri Lanka has recorded as the leader of Asia by demographic achievements, means that the first country in South Asia to achieve the fertility rate below replacement level by 1995-2000.

In the light of the above-mentioned facts, this paper addresses the Emmanuel Todd's theory of the cause of progress in the cultural ideology with relevance to the fertility behavior in Sri Lankan context. Results and discussion show that among the few main determinants, mainly female literacy rate has the highest impact on the decline the fertility level in Sri Lankan context. Fertility levels in Sri Lanka began to decline long before a policy decision to introduce family planning as a government national-wide program (which was launched in 1965). Other than this, many institutional, program and socio-economic factors were in place during this period, which facilitated the fertility decline, but increased literacy rate among the women has been remarkable. Sri Lanka offers a free education system and it is the one of important causes for achieving higher level literacy.

It is proved that the female literacy level has contributed to lower the fertility level through the rise in marriage age, in Sri Lanka. This statement is supported by Todd's argument on demographic transition and cultural ideology. According to Emmanuel Todd's (1987) in Sri Lankan life expectancy increased 32 to 66 while literacy increased 40 to 75 between 1920 to 1967 (also Malaria was eradicated by DDT) has turned the country into an island of true modernity within the third world. Delay in marriage has contributed significantly to fertility transition in Sri Lanka since 1970's (p.153).

On the contrary, Todd shows that Sri Lankan society is matrilineal or feminist and this leads to achieve higher literacy rates among female.(Ex: Table 2 and Todd (1987, p. 83). But we have enough evidence to show that Sri Lanka has long way to go to gender-neutral society. Therefore I do not agree with his classification for Sri Lanka as "Matrilineal and Vertical. " Matrilineal systems predominate in Kerala ,but are no more than substantial minorities within Sumatra and Sri Lanka as a whole"(Todd, 1987, p. 83)

Probably Todd refers to Tamil society that prevailed around 1971 since he has some academic references from N yalma (1967) who has written much on Tamil community. Tamil Morrs of Sri Lankan around 1971 numbered 900,000 in a total population of 12 million that is about 7.5 percent of the total (Todd,1987,p. 83). This presentage is not enough to generalize the result, as Todd notes matrilineal and vertical family system prevails in Tamil community to some extent, where kinship transfer through daughters. But still this society is considered as *patriarchal*. There are tons of empirical studies and statistics have proven that Sri Lankan women have to face gender unequal society in many senses. Ex: SLDHS (2009) demonstrates that 44 percent of women make joint decisions with their husbands on their own healthcare while corresponding percentages for major household purchases and visits to her family or next of kin were 58 and 65, respectively. In Sri Lanka, "the husband is usually the main source of household income; two-thirds of women earn less than their husband. Although the majority of women earn less than their husband, almost half have autonomy in decisions about how to spend their earnings"(SLDHS, 2009 p.22).

Also I agree with EU writer's s comments that Todd's explanation on family structures only focuses on unconscious pre modern values and has not mentioned about issues other than equality or liberty. How do we define nation's unconscious values in the pre modern, modern and postmodern ages? Todd, being a "good liberal," was also a "good European," and therefore a *priori* in favor of European integration in general (Willy,2013).

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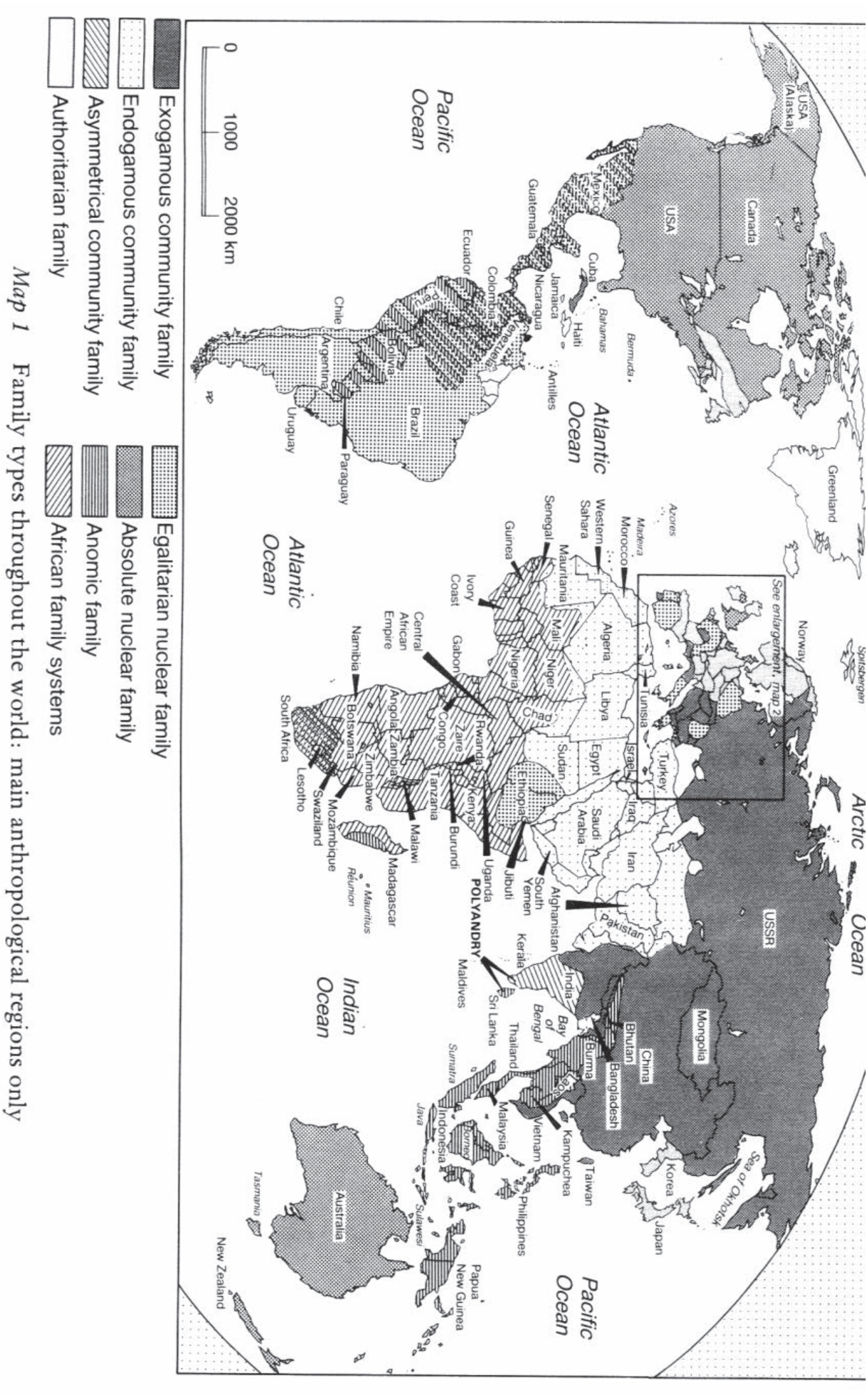
Appendix 1 Todd's world classification on family types throughout the world



Map 1 Family types throughout the world: main anthropological regions only

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