

# MPRA

Munich Personal RePEc Archive

## **The role of social capital in homogeneous society: Review of recent researches in Japan**

Yamamura, Eiji

1 November 2008

Online at <https://mpra.ub.uni-muenchen.de/11385/>  
MPRA Paper No. 11385, posted 08 Nov 2008 15:18 UTC

# The role of social capital in homogeneous society: Review of recent researches in Japan.

## ABSTRACT

It is widely and increasingly acknowledged that social capital plays a crucial role in the economic performance, which covers various facets of human behavior. A growing body of literature has sought to investigate the role of social capital mainly in heterogeneous societies such as USA, whereas works concerning homogeneous society have not yet sufficiently been provided. From the comparative point of view, researches on homogeneous society are called for. In this paper, therefore, I aim to introduce researches to explore how social capital affects the socio-economic outcomes of Japan, which is considered as a relatively homogeneous society. Recent preliminary empirical works attempted to provide the interesting evidence in Japan, which covers the following topics. (1) Criminal prevention, manner of driving, suicide, lawyers demand for conflict resolution (2) cinema and baseball attendance, (3) voter turnout, response to Census, and protection against natural disasters, (4) diffusion of knowledge, efficiency improvement and industrial development, (5) quality of life in terms of health, (6) formation of trust in a community. It follows from them that the social capital enhances the collective action, leading to benefit, however such effect has changed over time.

# I INTRODUCTION

Since in the beginning of 1990s where some influential works emerged (Coleman 1990, Putnam 1993, Fukuyama 1995), in the various field of social science, analysis of social capital has grown with the perceived importance of their impact on socio-economic outcomes (Dasgupta and Serageldin, 1999, Castiglione et al. 2008)<sup>1</sup>. I will consider the role played by social capital mainly from the standpoint of economics in this paper.

In the real world, mutually beneficial exchange is hindered due to rise in transaction cost caused partly by opportunistic behavior, leading to impediment of economic development<sup>2</sup>. The enforcement of contract is costly since there is possibility that agents breach contract. Following the argument of Putnam, in this paper, social capital is defined as “features of social organization, such as trust, norms and networks, that can improve the efficiency of society by facilitating coordinated action” (Putnam 1993, p.167)<sup>3</sup>. Social capital thus seems to play a critical role in preventing agents from taking opportunistic behavior, raising efficiency and so promoting the economic development (Hayami 2001)<sup>4</sup>. Such a

---

<sup>1</sup> Before 1990s, there have been already works which used the term of ‘social capital’ (e.g., Jacobs 1961, Loury 1977, Bourdieu 1986).

<sup>2</sup> In the circumstance such as modern developing countries or some historical world, the reason why that the market mechanism does not ideally function might be lack of appropriate formal institution providing the fundamental condition of market. In this situation, instead of formal institution, informal institution becomes relatively important in enhancing exchange among agents (Greif 1993, 1994, 2002, Okazaki 2005) through informal enforcement mechanism where agents change their partners over time and breaking a rule causes sanction by other members (Kandori, 1992). Accordingly, social capital, which seems to provide informal institution, draws a special attention particularly in the field of development economics (e.g., Dasgupta and Serageldin 1999, Hayami 2001, Francois and Zbojnik 2005).

<sup>3</sup> It should be noted that, despite its tremendous influence on researches of social science, the notion of social capital is ambiguous and thus there seems to be little agreement as to how to measure and conceptualize it (e.g., Paldam 2000, Sobel 2002, Durlauf 2002, Bjørnskov 2006 a, Fafchamps 2006, Callois and Aubert 2007). For instance, some researchers consider the interpersonal network as social capital (e.g., Annen 2001, 2003, Fafchamps and Minten 2001, 2002). Others considered the magnitude of trust as social capital (Glaeser et al. 2000, Berggren and Jordahl 2006). The magnitude of civic participation is also regarded as social capital (Fidrmuc and Gërkhani 2008).

<sup>4</sup> Contrary to the evidences provided by most researches supporting assertion of Putnam (1993, 2000), Miguel et al (2005) found that initial social capital is not associated with subsequent industrial development in the case of Indonesia. This result, however, is consistent with argument of Olson (1965, 1982) that social organizations, acting as specialized groups of interest, might decrease efficiency, leading to limit the growth

general view triggered a plethora of research aiming to assess how and the extent to which social capital considered as trust and networks favors economic growth (e.g., Knack and Keefer 1997, Knack 1997, Hall and Jones 1999, Whiteley 2000, Zak and Knack 2001, Beugelsdijk et al 2004, Iyer et al 2005, Beugelsdijk and van Schaik 2005a)<sup>5</sup>.

Degree of development is determined not only by the economic indicators such as GDP and total factor productivity, but also alternative indices covering various facet of life. In addition to growth, social capital encompasses multiple aspects of the development issues<sup>6</sup>. If social capital causes economic development, one might naturally asked the question of why and how social capital can be generated. There are number of empirical works attempting to cope with the fundamental question (e.g., Alesina and La Ferrara 2000, 2002, La Ferrara 2002, Uslaner 2002, Leigh 2006a, 2006b)<sup>7</sup>. It is found that magnitude of trust is affected not only by economic factors<sup>8</sup> such as income inequality (Bjørnskov 2006 b, Gustavsson and Jordahl 2008), and trade openness (Chan 2007), but also by institution including legal structure, security of property right (Berggren and Jordahl 2006), and structure of religion(La

---

possibility. Some works concern with the ‘Olson-Putnam Controversy’ (Knack 1997, Pena López and Sánchez Santos 2007).

<sup>5</sup> Besides works directly examining economic growth, various empirical works on social capital concerns the key factors of growth such as innovation(Hauser et al. 2007), diffusion of technology (Barr 2000), formation of market channel (Sporlender and Moss 2002, Fafchamps and Mantin 2001, 2002, Rauch 2001, Rauch and Trindade 2002), size of informal sector (Lassen 2007), development of financial and credit market (e.g., Udry 1994, Besley and Coate 1995, McMillan and Woodruff 1999, A’Hearn 2000, La Ferrara 2003, Guiso et al. 2004, Karlian 2005, Cassar et al. 2007).

<sup>6</sup> Besides issues discussed in this paper, there are wide range of topics in terms of social capital. For instance, in labor market, a large number of works concern with the mechanism of how people find a job through interpersonal network (e.g., Granovetter 1974, Montgomery 1991, Rebick 2000, Munshi 2003, Calvó-Armengol and Jackson 2004, Calvó-Armengol and Zenou 2005, Wahba and Zenou 2005, Antoninis 2006). The role of social capital on sustainable development is discussed especially in the field of agricultural economics (Rainey et al. 2003, Schmid 2003). In the psychological facet, interdisciplinary researches investigate how social capital is associated with life satisfaction (Bjørnskov 2003, 2006b, Bjørnskov et al 2008, Helliwell 2003, 2006, Kingdom and Knite 2007).

<sup>7</sup> Formation of social capital is also theoretically analyzed, for instance, by infinitely repeated prisoner’s dilemma approach (Vega-Redondo 2006), and individual based optimal investment framework (Glaeser et al 2000). Charles and Kline (2006), following Glaser et al (2000), examines the interaction between own and community characteristics for each racial group.

<sup>8</sup> Fischer and Torgler (2006) shed light on the psychological facet of income when social capital is examined. They measured relative income position by difference between the individual’s income and regional income and examine its impact on social capital.

Porta et al. 1997). Furthermore, social structure such as social heterogeneity is also considered as key determinant of social capital (Knack and Keefer 1997, Charles and Kline 2006). From existing literatures, I derive the argument that degree of social capital and its effect on outcomes varies as to the social condition.

Sociological features of Japan are thought to be more homogenous than nations previously explored<sup>9</sup>. As argued in Inoguchi (2002), social capital has increased steadily under democracy in the post-war period of Japan. Under such a condition, some relational specific systems, which are for instance main bank system (Aoki 2001, Ch 13) and manufacture-supplier relationship system (Asanuma 1989), have emerged and developed in Japan<sup>10</sup>. As a matter of course, several questions might arise as follows. How does social capital affect these systems? How different is the role played by social capital from other countries? Recently, empirical analysis of Japan began although it is not sufficiently compiled in order to comprehensively compare the evidence of Japan and that of other countries. This paper aims to survey preliminary findings in terms of how social capital affects the relatively homogeneous society such as Japan, which encompasses following issues<sup>11</sup>. (1) Criminal prevention, manner of driving, suicide, lawyers demand for conflict resolution, (2) cinema and baseball attendance, (3) voter turnout, response to Census and protection against natural disasters, (4) diffusion of knowledge, efficiency improvement and industrial development, (5) quality of life in terms of health (6) formation of trust in a community.

## II. REVIEW OF SOCIAL CAPITAL ON SOCIO-ECONOMIC OUTCOMES OF JAPAN

### *2.1. Deterrents of various problem (Criminal prevention, manner of driving, suicide, lawyers demand for conflict resolution)*

---

<sup>9</sup> The Hirfindahl-type index of the ethnic fragmentation of Japan presented is 0.02. As suggested in Alesina et al. (2003), the value of Japan is smaller not only than that of the USA (0.49) but also other countries such as France (0.10), the UK (0.12), and Germany (0.16).

<sup>10</sup> The social structure containing norms not only affects the economic activity but also is continuously reconstructed as a result of economic outcomes (Granovetter 1985).

<sup>11</sup> It is observed in prior empirical works that residential mobility and community centers are negatively and positively associated with social capital, respectively (Kan 2007, Putnam 2000). In Japan, the fire fighting team is a voluntary organization operated by community member, leading to make a contribution to social capital formation (Goto 2001). In most of researches introduced of this paper, effects of social capital are measured by them.

In a modern society of Japan, formal rules appears to be required to have more crucial roles than informal ones since society becomes anonymous accompanying economic development. The classical work of Kawashima (1963) put focus on the cultural preference for informal mechanisms of dispute resolution in Japan and asserted that harmonious nature of Japan discourage people to litigate<sup>12</sup>. I interpret this view as being in line with the modern theory developed in economics that personalized relationships, which is sustained by informal rule, endured as modes of exchange and conflict resolution despite the possibility of anonymous market based on formal rule (Kranton 1996). Such informal system, however, disappear when market sufficiently grows so that individuals can easily engage in market transaction (Kranton 1996, Hayami 2001). Then, the question arises that role of informal rules disappears in highly developed and anonymous societies such as Japan. In an attempt to explore it, thus far some empirical works have been conducted. Yamamura (2007a) examine the extent to which social capital reinforcing social norms can be effective and substitute for formal laws through an examination of the determinants of the demand for lawyers. The following evidence provided.

#### Finding 1

*A high stock of social capital where society is tightly knit results in a reduction of any demand for a lawyer. On the other hand, conflict generated by bankruptcies and debts causes people to seek legal resolutions, and thus need to rely on lawyers. Increase in number of firms reflecting vital economic activity brought about a rise in the demand for lawyers.*

If a culprit might suffer ostracism within a community when a crime or a fatality takes place (Posner and Rasmusen, 1999), community member is less likely to commit a crime and drive dangerously. Since cost of committing a crime stemming from a sanction is very large (Funk, 2005). Such deterrent seems to be more effective in more closely knitted community with abundant social capital (Lederman 2002)<sup>13</sup>. In order to empirically explore it, some works concerns the question of how

---

<sup>12</sup> Ginsburg and Hoetker (2006) do not find supporting evidence for the hypothesis that cultural factors play a major role in Japan. Nevertheless, they do not closely examine the social capital effect on litigation by regression estimation.

<sup>13</sup> Costa and Kahn (2003 b) found that pro-war communities produced fewer deserters, implying credible social sanctions help bring about social benefit. The social sanction for deserters is so severe that deserters were more likely to leave home and to move to

the informal deterrents based on social capital within a community affect unfavorable incidents such as traffic accidents and crimes (Yamamura 2007b, 2008b). Let me indicate their key findings as below.

#### Finding 2

*Formal deterrents, such as police, cause drivers to drive attentively but that such deterrents are not inversely related with dangerous driving. On the other hand, informal deterrence impedes dangerous driving but does not induce drivers to drive attentively.*

#### Finding 3

*Police presence and social capital reduce crime rates and their effects become larger when the endogeneity bias of number of police is controlled for. The relationship between police presence and social capital is complementary in their reduction of the crime rate.*

All in all, findings presented above tell that formal rule is thought to become important in conflict resolution and prevent people from committing a crime and driving dangerously. On the other hand, informal rule based on social capital continues to be effective, to some extent, in reducing likelihood that conflict occurs and deterring crime and fatality. This is likely to imply that modern Japan now transits gradually from the community based society which relies heavily on informal rule to anonymous society based on formal rule. It seems that changes of social system lag behind the rapid economic growth experienced by Japan in the post-war period.

### *2.2. Demand behavior (cinema and baseball attendance)*

As argued by Putnam(2000), informal social networks regarded as a type of social capital, which enhance the visiting of various entertainment and sports venues with colleagues or acquaintances. Formation of informal social network is thus thought to increase demand for leisure industry, resulting in its development.

According to Becker and Murphy (2000), social capital is thought to captures the effect of social milieu, an individual's stock of social capital depends not primarily on his own choice, but on the choices of peers in the relevant network of interactions. Theoretically, Becker and Murphy (2000) incorporates social influences such as "social capital" into the conventional demand model. They also

---

anti-war community and to restart their life by changing their names (Costa and Kahn 2007).

consider the utility function

$$U=(x;S),$$

where  $x$  are simply goods of all kinds.  $S$  represents social influences on utility through a stock of “social capital”. Changes in  $S$  would have an effect upon the demand behavior if marginal utilities of different goods are raised or lowered by  $S$ . The fundamental assumption in considering the influence of  $S$  is that  $S$  and  $x$  are complements, so that an increase in  $S$  raises the marginal utility from  $x$ . In this paper,  $S$  is called as the informal social network.

Based on this view, Yamamura(2008a) makes it evident that social network affect both cinema attendance and location choice of multiplex, causing film industry to revive in Japan..

#### Finding 4

*The weaker informal social networks are, the more people are less likely to go to cinemas. Multiplex cinemas are less likely to be located in areas where social networks are weaker.*

If social capital is generated through interpersonal interaction in the local community, social capital is strongly associated with demand of community members. For instance, people are likely to be fan of his home town team. Further, they are more inclined to cheer the team when starting members come from home town rather than from outside. That is to say, social capital has an influence on one’s preference. In the case study of Japan Professional Baseball League, such home town effect on game attendance is examined (Yamamura 2008 g).

#### Finding 5

*The salary of the home team’s starting pitcher is positively associated with game attendance, while that of the visiting team’s is not. Furthermore, the positive effect of salary on attendance is larger when the starting pitcher’s is from the same hometown as that of the team when a game is held in that town.*

The magnitude of salary is thought to reflect not only player’s performance on the field but also the degree of player’s popularity. It is interesting to interpret above finding as implying that social capital makes a great contribution to player’s popularity. To put it differently, player’s popularity varies as to regions. It follows from it that informal personal ties play an important role in developing some industries.



### *2.3. Collective action and resolution to free rider (voter turnout, response to Census, protection against natural disasters)*

In the real world, collective action is called for in various situations when there is problem market mechanism cannot solve. It is, however, also widely known that people confront difficulty in realizing collective action (Olson 1965). Collective action requires the cooperative behavior, which seems to be enhanced by social capital (Putnam 1993, 2000). To take some case studies in Japan, let me assess the question of how social capital enhances collective action.

The public benefit of society is considered to be realized through election and voting. Public decision might be reflected in a result of election so that public opinion tends to mirror in policy when collective action takes place. According to Knack(1992), social norm has a positive effect on voter turnout. In case of Japan, the following finding is provided by Yamamura (2008k), which in line with presumption.

#### Finding 6

*The voter turnout is higher in a close-knit community; therefore, social capital enhances voting. Economic and generational fractionalization results in a lower voter turnout.*

Collective action is called for in order to generate public benefits, such as when people respond to census questionnaires (Vigdor, 2004). In Japan, collection rate of census rapidly declined and then it becomes one of the central issues whether existing census system make a contribution to society or not. If response to census results in benefit of community, it is interesting to assess the cause of low collection rate<sup>14</sup>. Yamamura (2008d) attempted to explore the question of why collective action cannot be succeeded and to ascertain the determinants of uncollection rate.

#### Finding 7

*The decay of social capital raised the uncollection rate. Moreover, income inequality is associated with a low response rate, while generational heterogeneity is associated with a high response rate.*

---

<sup>14</sup> Communities receive tax grants distributed from the central government to local governments. According to Local Allocation Tax Law, Census data is used when tax grants distributed to local governments are calculated. Accordingly, an individual's failure to fill out the census results in a decrease in the tax grants allocated to communities.

This is partly consistent with existing literature of collective action in income inequality (Vigdor, 2004), but not with it in generational heterogeneity effect. It is thus necessary to examine the question of why heterogeneities have a different effect on collective action. What is more, a negative effect of income inequality raised the following questions, which should be explored in further researches. Does income inequality have an influence on people's perception about benefit from response to census? Does income inequality have a detrimental effect on the allocation of tax grants through political decision<sup>15</sup>?

Recently, there has been increasing interest in investigating how and the extent to which institution and social structure reduce victims of natural disaster (e.g., Anbarci et al. 2005, Kahn 2005, Escaleras et al. 2007). Collective action might play a critical role in coping with risk such as natural disaster since market cannot perfectly deal with it even though market is undoubtedly important<sup>16</sup>. About 20 % of earthquakes of magnitude 6 and over occurred in Japan, although Japan landmass is only 0.25% of World's<sup>17</sup>. This implies that, compared with other countries, Japan should frequently suffer earthquake related natural disasters and therefore economic loss resulting from these should be recognizable. Therefore, protection against such damage is considered a central issue of economic policy. Yamamura (2008 e) explore the role played by social capital in reducing victim and found as follows.

#### Finding 8

*Thanks to complementary between social capital and a spillover of information about natural disasters, cooperative behavior is thought to be more easily organized, thereby reducing the damage resulting from such a disaster.*

#### *2.4. Diffusion of knowledge and efficiency improvement*

Unprecedented economic growth of Japan has triggered a huge amount of research about the underlying reasons. One of reasons is considered that that the long-term transaction between firms, which is for instance reflected in manufacture-supplier relationship, played an important role in industrial

---

<sup>15</sup> Generally, income inequality is expected to increase the tax grants.

<sup>16</sup> In Asian community, it is argued that patron-client relationship between landlords and tenants, which is solidified within community, serves as safety network to secure clients' minimum subsistence (Scott 1976). More recently, it is found that social networks play a key role in the provision of mutual insurance (Fafchamps and Lund 2003).

<sup>17</sup> Japan incurred 13 % of the total amount of damage resulting from natural disasters worldwide during the past 30 years. See for A Disaster Prevention White Paper (In Japanese). <http://www.bousai.go.jp/hakusho/h19/index.htm>.

development (Asanuma 1989). Such relationship seems to be based on particularized trust regarded as a part of social capital<sup>18</sup>. Necessarily, investigation of a social capital effect on economic efficiency is called for. Yamamura (2007 d) used the aggregated prefecture level data to decompose output growth into efficiency improvement, technological progress and capital accumulation. And then he examined their determinants by including proxy of social capital and human capital at the same time and reports the following finding.

#### Finding 9

*The degree of social capital promotes efficiency improvement and capital accumulation at the same time. On the other hand, human capital only enhances efficiency improvement. The elasticity of efficiency improvement with respect to human capital is about eight times larger than that with respect to social capital.*

From it I argued that human capital has a larger impact on technological catch-up, although both trust and human capital make contributions. Even if this holds true, it is still unclear how relative importance of human capital and social capital changed over time. Based on purposefully constructed firm level data through field researches, Yamamura (2005, 2008f) explored the change of roles played by human capital and social capital, considering long-term development process of garment cluster in Japan<sup>19</sup>.

#### Finding 10

*In the developing stage, the manager of a firm makes decisions and learns from their outcomes under conditions constrained by the social norms. In such a situation, social capital was found to improve the learning effect. That is, social trust and learning is complementary. In the developed stage where an ideal market emerges, a manager's decision making is not constrained by local rules. Due to environment changes, human capital improves the learning effect, while social capital comes to have a detrimental effect on learning.*

I found it a unique contribution to provide that the dynamic process of economic development is accompanied by the change of role played by human capital and social capital. Although Putnam (1993, 2000) provides abundant evidence of how

---

<sup>18</sup> Before notion of social capital was discussed from the view point of economics, critical nature of trust was recognized in transaction by Arrow (1972).

<sup>19</sup> Cluster might enjoy also a benefit arising from agglomeration. Soubeyran and Weber (2002) develop the theoretical district formation model considering social capital effect such as local socio-economic spill over.

social capital changed over time, he did not use regression estimation so that he failed to precisely demonstrate how the role played by social capital changed. On the other hand, most of existing literatures examining effect of social capital on economic growth did not concern with such dynamic process probably because of scarcity of long term data.

Individuals learn how to use a machine from the choices of others also using the same machine so that social learning is important after a new technology has been adopted (e.g., Foster and Rosenzweig 1995, Munshi 2004). Further, it seems worthwhile investigating whether individual's decisions to adopt a new technology is related to the adoption choices of members belonging to social network. Bandiera and Rasul (2006) analyzes the question of how that social capital (social network) has an influence on social learning in the situation where lack of information is a barrier to become user and potential users can communicate with each other. In this line, Yamamura(2008c) shed light on the diffusion process of technology among people and explore how social capital promote the technology diffusion, thereby increasing demand<sup>20</sup>.

#### Finding 11

*Social capital such as interpersonal network plays an important role, especially when a high fraction of the surrounding people already own computers, in the diffusion of computers within a community.*

Findings 9-11 lead me to argue that social capital has positive effect on technology diffusion not only between firms but also between consumers, and such effect changes due to the circumstance change.

### *2.5. Quality of life in terms of health*

The role played by social structure such as social capital and its effect on health have been discussed considerably so far by epidemiologists (e.g., Kawachi et al., 1997, 1999, 2007, Brown et al 2006, Petrou and Krupek 2008). People seem to enjoy a high degree of social cohesion in post-war Japan. In these days, however, it is observed number of suicides tend to rise in Japan. This might be not only because of economic stagnation since early 1990's, but also because of collapse of interpersonal relationship limiting people to access to various supports including emotional support (Durkheim 1951). Some studies have, however, argued that social

---

<sup>20</sup> In case study of FIFA football ranking, Yamamura(2008 i) provides the evidence that technology transfer is impeded as a result of team member's heterogeneity.

environmental factors have little impact upon suicide (Kunze and Anderson, 2002; Kushner and Sterk, 2005). Accordingly, it is required to more closely explore socio-economic impact. After controlling for economic factors, how and the extent to which have social factors influence on suicide? Furthermore, is there difference of social capital effect between male and female? In an attempt to reply these questions, Yamamura (2007e) used Japan panel data to examine it and providing the following finding.

#### Finding 12

*Female labor participation rates are lower than those of males, and as a result females have more spare time to spend with neighbors than do males. Accordingly, social capital is more apt to decrease the likelihood of committing suicide in females than in males.*

This tells that a social capital effect is profoundly connected with condition of labor market. One who gains income by being employed is more likely to be disintegrated to community. From the view point of economics, it is hence necessary to compare benefit and cost when one participates in labor market.

Association of between health and social capital can be considered from another standpoint. In modern society, negative externality caused by smoking can be taken as one of major topics of health related issues. In order to decrease negative externality, social pressure is considered to be effective in making smoker cease to smoke. Social pressure appears to increase psychological cost of annoying surrounding people and to be increasing function of social capital (Funk, 2005). As a consequence, social capital seems to raise psychological cost, leading to smoking prevention. Yamamura (2007 c) examine how social capital decreases smoking and reports the finding as below.

#### Finding 13

*The influence from others is stronger when social capital is larger. Thus, social capital helps to create a reduction of smoking through smoking-related interaction.*

Various findings tell that social capital improves health. The channels, through which social capital affect health, are different so that argument becomes ad hoc and unclear. It is, hence, required to provide more consistent interpretation based upon well-developed theoretical framework in further research.

## *2.6. Formation of trust*

Besides the formal rule, informal rule is thought to provide the base of interpersonal exchange through network. Informal rule is sustained by a morality which can be categorized as a 'limited group morality' and a 'generalized morality'. A 'limited group morality' is characterized by applicability to close acquaintances and relatives whereas 'generalized morality' is by applicability to wide society (Platteau 1994). It seems appropriate that a morality also generates a trust among society members. More recently, in line with the assertion of Platteau(1994), number of researchers argued that there is difference between a generalized trust and a particularized trust(Uslaner 2002), and then pointed out a generalized trust is more important in generating large efficiency gains than particularized trust (Fafchamps 2006). This is why generalized trust draws special attention and a lot of works were compiled (e.g., Leigh 2006a, 2006b, Bjørnskov 2006 b, Berggren and Jordahl 2006, Chan 2007, Gustavsson and Jordahl 2008). On the other hand, there are arguments that particularized trust plays more important role in economic development (Hayami 2001, Cassar et al. 2007)<sup>21</sup>. But actually a trust cannot be simply categorized as above. As pointed out by Uslaner(2002), neighborhood trust is a mixture of generalized and particularized trust. Yamamura(2008h, 2008 j) attempts to examine how neighborhood trust is generated in Japan for more closely considering a trust and provides the following finding<sup>22</sup>.

#### Finding 14

*Income inequality is associated with low trust for both young and old generations. It is also interesting to observe that strangers hardly affect neighborhood trust. Age homogeneity and education are associated with low trust; this tendency is, however, not observed when the sample includes only old generation respondents.*

In line with evidence previously presented by existing literatures (Bjørnskov 2006 b, Gustavsson & Jordahl 2008), income inequality effects on neighborhood trust are equivalent to those for generalized trust. Characteristics of generalized trust are also mirrored in the fact that strangers do not influence trust. In contrast to it, influences

---

<sup>21</sup> Social capital is important and effective in enhancing the complementarities among markets, states and communities rather than realizing efficient market if social capital is regarded as particularized trust (Hayami 2001, Bowles and Gintis 2002).

<sup>22</sup> According to Yamagishi (1988), Japanese society provides as system of mutual monitoring that raises the degree of trusting behavior. It is found, however, that Americans have a higher level of generalized trust than Japanese in situation where mutual monitoring and sanction do not exist (Yamagishi and Yamagishi 1994, Yamagishi et al 1998), which is contrary to the seemingly general view of trust among Japanese (Fukuyama 1995).

of age homogeneity and human capital on neighborhood trust are not consistent with those on generalized trust. Further, their impacts are partly affected by the feature of the generations. From what is presented here, it is plausible to argue that features of neighborhood trust are under the influence of changes in circumstances and so evolve over time. This is in line with the assertion of Bloch et al (2007) that community may survive small external shocks, but may break down under more stressful circumstance since community holds conflicting features which increase not only the value of abiding to mutual aid norm but also that of coordinated deviation. Even if, as generally believed, a community is closed to strangers, it is induced to open up and adjusted to the modern socio-economic environment under pressure of nation-wide or global economic integration. In short, feature of community and interpersonal trust within a community relies on the circumstance especially during a transition period<sup>23</sup>.

What is more, besides factors discussed above, cultural, historical, and other socio-economic factors seems to be important in eliciting trust<sup>24</sup>. Therefore, in order to clarify how such factors affects trust, increasing body of field and experimental researches are conducted in various area such as Russia(Gächter et al. 2004) Southeast Asia (Carpenter et al., 2004a, 2004b, 2006) and Africa (Danielson and holm 2007). Further, there are comparative researches between different cultural back-ground areas<sup>25</sup>.

### III. CONCLUSION

Japan appeared to be characterized by racially and economically homogeneous society and long-term interpersonal relation, resulting in accumulating abundant social capital. As I have outlined thus far, various findings in recent empirical works reveal that social capital reduces transaction cost and facilitates collective action, leading to beneficial outcome in Japan. However, the miraculous economic growth which Japan has experienced in the post-war period is thought to be followed by

---

<sup>23</sup> Carpenter et al. (2006) argued that space and location are important to comprehend trust.

<sup>24</sup> What should also be emphasized is that the level of trust varies by gender (Croson and Buchan 1999, Yamamura 2008j ).

<sup>25</sup> Holm and Danielson (2005) compares Nordic and African trust through experimental approach. Buchan and Croson(2004) employed the investment game to compare an effect of social distance on trust between US and China. There are also existing comparative works between Japan and US(e.g., Yamagishi and Yamagishi 1994, Yamagishi et al. 1998), Japan and Switzerland (Frietag 2004).

collapse of tightly knitted interpersonal relationship<sup>26</sup>. To put it in another way, in the process of economic development, community is integrated in to a wider economic and political system so that relationship among community members gradually changed. Inevitably, the role of social capital and its importance in Japanese society changed over time.

The social capital regarded as local public goods which can provide sanction system play a critical role in leading to efficient outcomes when formal institution has failed to be established (Yamagishi 1986, Hayami 2001). Nevertheless, this feature of social capital limits the individual's business within a closed network, thereby decreasing likelihood that individuals maximize a gain from exchange with outsiders. This implies that social capital is effective in doing small business where exchange is limited within a community, but is ineffective in large-small business in anonymous market. Accordingly, community mechanism relied on huge social capital, which includes particularized trust, make a great contribution to improve socio-economic outcomes in the developing stage, whereas human capital and formal institution and generalized trust become more effective in increasing benefits of society through anonymous market exchange in the developed stage. Although role played by social capital does not disappear in various aspects, it is required to take into account such a dynamic aspect when presented findings in this paper are interpreted.

On the other hand, it is worthwhile pointing out that there is possibility that social capital have detrimental effect on socio-economic outcomes (e.g., Olson 1965, 1982, Putnam 2000 Chapter 22, Lederman et al. 2002). Hence, what should be borne in mind is the question of how and the extent to which social capital causes not only benefit but also cost. I come now to the point at which it is necessary to scrutinize an effect of social capital on socio-economic outcomes and to weigh benefit stemming from social capital against cost from it<sup>27</sup>.

In terms of methodology and approach, what should be emphasized is to pay a special attention to the way of measuring social capital for the purpose of providing the useful information on which policy-makers depend (Karlan 2005, Beugelsdijk and van Schaik 2005b, Western et al. 2005, Bjørnskov 2006 b, Callois and Aubert 2007). Most of these empirical findings presented in this paper, with the exception

---

<sup>26</sup> It is observed in US that social capital has declined during the long term period (Costa and Kahn 2003a, Putnam 2000).

<sup>27</sup> Using trading model to investigate connection growth labor mobility and social capital, Routledge and von Amsberg (2003) indicated that social capital increased at the expense of efficient mobile labor force.



of case study of garment cluster and professional baseball, are obtained through statistical analysis based upon aggregated data at the prefectural level. Inevitably, the basic information about individual characteristics, such as sex, education level, age, and income, cannot be captured. Furthermore, proxies for social capital are ad-hoc. Consequently, as a whole, the findings covering various facet of Japan are thought to be suffered from estimation biases, and so cannot sufficiently make it evident that social capital has a significant influence on socio-economic outcomes. In contrast, research on other countries began to assess how individual features are associated with social capital (e.g., Charles and Kline 2006, Fidrmuc and Gërkhani 2008), by using disaggregated individual data. In order to compare effect of social capital between Japan and other countries, more precise investigation on Japan should be required.

Future direction for researches of social capital in Japan will be to examine, by using appropriate proxy for social capital at the individual level, cost and benefit coming from social capital in modern Japan regarded as ‘transition economy’.

## REFERENCES

- A'Hearn, B. (2000). Could southern Italians cooperate? Banche popolari in the Messogiorno. *Journal of Economic History*, 60, 67-93.
- Alesina, A., and La Ferrara, E. (2000). Participation in heterogeneous communities. *Quarterly Journal of Economics*, 115, 847-904.
- Alesina, A., and La Ferrara, E. (2002). Who trusts others ?. *Journal of Public Economics*, 85, 207-234.
- Alesina, A., Devleeschauwer, A., Easterly, W., Kurlat, S., and Wacziarg, R. (2003). Fractionalization. *Journal of Economic Growth*, 8, 155-194.
- Anbarci, N., Escaleras, M., and Register, C. (2005). Earthquake fatalities: the interaction of nature and political economy. *Journal of Public Economics*, 89, 1907-1933.
- Annen, K. (2001). Inclusive and exclusive social capital in the small-firm sector in developing countries. *Journal of Institutional and Theoretical Economics*, 157, 319-330.
- Annen, K. (2003). Social capital, inclusive networks, and economic performance. *Journal of Economic Behavior and Organization*, 50, 449-463.
- Antoninis, M. (2006). The wage effects from the use of personal contacts as hiring channels. *Journal of Economic Behavior and Organization*, 59, 133-146.
- Aoki, M. (2001). *Towards a Comparative Institutional Analysis*. MIT Press.
- Arrow, K.J. (1972). *The Limits of Organization*. New York: Norton Press.
- Asanuma, B. (1989). Manufacture-supplier relationships in Japan and the concept of relation specific skill. *Journal of Japanese and International Economics*, 3, 1-30.
- Bandiera, O. and Rasul, I. (2006). Social networks and technology adoption in northern Mozambique. *Economic Journal*, 115, 869-902.
- Barr, A. (2000). Social capital and technical information flows in Ghanaian manufacturing sector. *Oxford Economic Paper*, 52, 539-559.
- Becker, G and Murphy, K. (2000). *Social Economics: Market Behavior in a Social Environment*. Cambridge: Harvard University Press.
- Berggren, N., and Jordahl, H. (2006). Free to trust: economic freedom and social capital. *Kyklos*, 59, 141-169.
- Besley, T. and Coate, S. (1995). Group lending, repayment incentives and social collateral. *Journal of Development Economics*, 46, 1-18.
- Beugelsdijk, S., de Groot, H.L.F., and van Schaik. (2004). Trust and economic

- growth: a robustness analysis. *Oxford Economic Papers*, 56, 118-134.
- Beugelsdijk, S., and van Schaik, T. (2005a). Social capital and growth in European regions: an empirical test. *European Journal of Political Economy*, 21, 301-324.
- Beugelsdijk, S., and van Schaik, T. (2005b). Differences in social capital between 54 Western European regions. *Regional Studies*, 39, 1053-1064.
- Bjørnskov, C. (2003). The happy few. Cross country evidence on social capital and life satisfaction. *Kyklos*, 56, 3-16.
- Bjørnskov, C. (2006 a). The multiple facets of social capital. *European Journal of Political Economy*, 22, 22-40.
- Bjørnskov, C. (2006 b). Determinants of generalized trust: A cross-country comparison. *Public Choice*, 130, 1-21.
- Bjørnskov, C., Dreher, A., Fischer J.A.V. (2008). Cross-country determinants of life satisfaction: exploring different determinants across groups in society. *Social Choice and Welfare*, 30,119-173.
- Bloch, F., Genicot, G., and Ray,D. (2007). Reciprocity in groups and the limits to social capital. *American Economic Review*, 97, 65-69.
- Bourdieu, P. (1986). The forms of capital. in Richardson,J.G. (eds), *Handbook of Theory and Research for the Sociology of Education*, New York: Greenwood, 241-258.
- Bowles, S., and Gintis, H. (2002). Social capital and community governance. *Economic Journal*, 122, F419-F436.
- Brown, T.T., Scheffler, R.M., Seo, S., and Reed, M. (2006). The empirical relationship between community social capital and the demand for cigarettes. *Health Economics*, 15, 1159-1172.
- Buchan, and Croson, R. (2004). The boundaries of trust: own and others' action in the US and China. *Journal of Economic Behavior and Organization*, 55, 485-604.
- Callois, J.M., and Aubert, F. (2007). Towards indicators of social capital for regional development issues: The case of French rural areas. *Regional Studies*, 41, 809-821.
- Calvo-Armengol, A. and Jackson, M.O. (2004). Social networks in determining employment patterns, dynamics, and inequality. *American Economic Review*, 94, 426-454.
- Calvo-Armengol, A. and Zenou, Y. (2005). Job matching, social network and

- word-of-mouth communication. *Journal of Urban Economics*, 57, 500-522.
- Carpenter, J.P., Danieri, A.G., and Takahashi, L.M. (2004 a). Cooperation, trust, and social capital in southeast Asian urban slums. *Journal of Economic Behavior and Organization*, 55, 533-551.
- Carpenter, J.P., Danieri, A.G., and Takahashi, L.M. (2004 b). Social capital and trust in southeast Asian cities. *Urban Studies*, 41, 853-874.
- Carpenter, J.P., Danieri, A.G., and Takahashi, L.M. (2006). Space, trust, and communal action: results from field experiments in Southeast Asia. *Journal of Regional Science*, 46, 681-705.
- Cassar, A., Crowley, L., and Wydick, B. (2007). The effect of social capital on group loan repayment: Evidence from field experiments. *Economic Journal*, 117, F85-F106.
- Castiglione, D., Van Deth, J., and Wolleb, G (eds). (2008). *The Handbook of Social Capital*. New York: Oxford University Press.
- Chan, K.S. (2007). Trade, social values, and the generalized trust. *Southern Economic Journal*, 73, 733-753.
- Charles, K.K., and Kline, P. (2006). Relational costs and the production of Social Capital: Evidence from Carpooling. *Economic Journal*, 116, 581-604.
- Coleman, J.S. (1990). *Foundation of Social Theory*. Cambridge: Harvard University Press.
- Costa, D.L., and Kahn, M.E. (2003 a). Understanding the American decline in social capital. *Kyklos*, 56, 17-46.
- Costa, D.L., and Kahn, M.E. (2003 b). Cowards and heroes: group loyalty during the American civil war. *Quarterly Journal of Economics*, 118, 19-48.
- Costa, D.L., and Kahn, M.E. (2007). Deserters, social norms, and migration. *Journal of Law and Economics*, 50, 323-353.
- Croson, R. and Buchan, N. (1999). Gender and culture: international experimental evidence from trust games. *American Economic Review*, 89, 386-391.
- Danielson, A.J., and Holm, H.J. (2007). Do you trust your brethren? Eliciting trust attitudes and trust behavior in a Tanzanian congregation. *Journal of Economic Behavior and Organization*, 62, 225-271.
- Dasgupta, P., and Serageldin, I (eds). (1999). *Social Capital: a Multifaceted Perspective*. Washington, DC: World Bank.

- Durkheim, E. (1951). *Suicide: A Study in Sociology*. Translated by J. A. Spaulding and G. Simpson. Gencoe, IL: Free Press.
- Durlauf, S.N. (2002). On the empirics of social capital. *Economic Journal*, 122, F459-F479.
- Escaleras, M., Anbarci, N., and Register, C. (2007). Public Sector Corruption and Major Earthquakes: A Potentially Deadly Interaction. *Public Choice*, 132, 209-230.
- Fafchamps, M. (2006). Development and social capital. *Journal of Development Studies*, 42, 1180-1198.
- Fafchamps, M. and Minten, B. (2001). Social capital and agricultural trade. *American Journal of Agricultural Economics*, 83, 680-685.
- Fafchamps, M. and Minten, B. (2002). Return to social network capital among traders. *Oxford Economic Papers*, 54, 173-206.
- Fafchamps, M. and Lund, S. (2003). Risk-sharing networks in rural Philippines. *Journal of Development Economics*, 71, 261-287.
- Fidrmuc, J., and Gërxhani, K. (2008). Mind the gap! Social capital, east and west. *Journal of Comparative Economics*, 36, 264-286.
- Fischer, J.A.V., and Torgler, B. (2006). The effect of relative income position on social capital. *Economics Bulletin*, 26, 1-20.
- Foster, A and Rosenzweig, M. (1995). Learning by doing and learning from others: human capital and technical change in agriculture. *Journal of Political Economy*, 103, 1176-1209.
- Francois, P., and Zabojnik, J. (2005). Trust, social capital, and economic development. *Journal of European Economic Association*, 3, 51-94.
- Freitag, M. (2004). Social capital in (dis)similar democracies: the development of generalized trust in Japan and Switzerland. *Comparative Political Studies*, 36, 936-966.
- Fukuyama, F. (1995). *Trust: The Social Virtues and Creation of Prosperity*. London: Hamish Hamilton.
- Funk, P. (2005). Government action, social norms, and criminal behavior. *Journal of Institutional and Theoretical Economics*, 161, 522-535.
- Gächter, S., Herrmann, B., and Thöni, C. (2004). Trust, voluntary cooperation, and socio-economic background: survey and experimental evidence. *Journal of Economic Behavior and Organization*, 55, 505-531.
- Goto, I. (2001). *Tracing the origin of the communal fire-fighting team: Communal fire-fighting teams in the 21st century* (Shobo-dan no Genkryu o Tadoru:

- 21seki no Shobo-dan no Arikata). Tokyo: Kindaishobo-sha.
- Ginsburg, T., and Hoetker, G. (2006). The unreluctant litigant? An empirical analysis of Japan's turn to litigation, *Journal of Legal Studies*, 35, 31-59.
- Glaeser, E.L., Laibson, D., Scheinkman, J.A., and Soutter, C.L. (2000). Measuring Trust. *Quarterly Journal of Economics*, 115, 811-846.
- Glaeser, E.L., Laibson, D., and Sacerdote, B. (2002). An economic approach to social capital. *Economic Journal*, 122, F437-F458.
- Granovetter, M. (1974). *Getting a Job: A Study of Contacts and Careers*, Cambridge, MA: Harvard University Press.
- Granovetter, M. (1985). Economic action and social structure: the problem of embeddedness. *American Journal of Sociology*, 91, 480-510.
- Greif, A. (1993). Contract enforceability and economic institutions in early trade: the Maghribi traders' coalition. *American Economic Review*, 83, 525-548.
- Greif, A. (1994). Cultural beliefs and the organization of society: A historical and theoretical reflection on collectivist and individualist societies. *Journal of Political*, 102, 912-950.
- Greif, A. (2002). Institutions and impersonal exchange: from communal to individual responsibility. *Journal of Institutional and Theoretical Economics*, 158, 168-204.
- Guiso, L., Sapienza, P., and Zingales, L. (2004). The role of social capital in financial development, *American Economic Review*, 94, 526-556.
- Gustavsson, M., and Jordahl, H. (2008). Inequality and trust in Sweden: Some inequalities are more harmful than others. *Journal of Public Economics*, 92, 348-365.
- Hall, R.E. and Jones, C.I. (1999). Why do some countries produce so much more output per worker than others? *Quarterly Journal of Economics*, 114, 83-116.
- Hayami, Y. (2001). *Development Economics: From the Poverty to the Wealth of Nations*. New York: Oxford University Press.
- Hauser, C., Tappeiner, G., and Walde, J. (2007). The learning region: the impact of social capital and weak ties on innovation. *Regional Studies*, 41, 75-88.
- Helliwell, J. F. (2003). How's life? Combining individual and national variables to explain subjective well-being. *Economic Modeling*, 20, 331-360.
- Helliwell, J. F. (2006). Well-being, social capital and public policy: What's new?. *Economic Journal*, 116, C34-C45.

- Holm, J.H., and Danielson, A. (2005). Tropic trust versus Nordic trust: Experimental evidence from Tanzania and Sweden. *Economic Journal*, 115,505-532.
- Inoguchi, T. (2002). Broadening the basis of social capital in Japan in R.D. Putnam (eds) *Democracies in Flux: The Evolution of Social capital in Contemporary Society*. New York: Oxford University Press.
- Iyer, S., Kitson, M and Toh, B. (2005). Social capital, economic growth and regional development. *Regional Studies*, 39, 1015-1040.
- Jacobs, J. (1961). *The Death and Life of Great American Cities*. New York: Random House.
- Kan, K. (2007). Residential mobility and social capital. *Journal of Urban Economics*, 61, 436-457.
- Karlian, D.S. (2005). Using experimental economics to measure social capital and predict financial decisions. *American Economic Review*, 95, 1688-1699.
- Kahn, M. (2005). The death toll from natural disasters: the role of income, geography, and institutions. *Review of Economics and Statistics*, 87, 271-284.
- Kandori, M. (1992). Social norm and community enforcement. *Review of Economic Studies*, 59, 63-80.
- Karlan, D.S. (2005). Using experimental economics to measure social capital and predict financial decisions. *American Economic Review*, 95, 1688-1699.
- Kawachi, I., Kennedy, B .P., Lochner, K., and Prothrow-stith, D. (1997). Social capital, income inequality, and mortality. *American Journal of Public Health*, 87,1491-1498.
- Kawachi, I., Kennedy, B .P., Lochner, K., and Glass, R. (1999). "Social capital and self-related health: a contextual analysis," *American Journal of Public Health*, 89, 1187-1193.
- Kawachi, I., Subramanian, S.V., and Kim, D. (eds) (2007). *Social Capital and Health*. Springer.
- Kawashima, T. (1963). Dispute Resolution in Contemporary Japan. *Law in Japan: The Legal Order in a Changing Society*, edited by Arthur von Mehren. Cambridge: Harvard University Press.
- Kingdom, G.G., & Knight, J. (2007). Community, comparisons and subjective well-being in a divided society. *Journal of Economic Behavior & Organization*, 64, 69-90.
- Knack, S. (1992). Civic norms, social sanctions and voter turnout. *Rationality and*

*Society*, 4, 133-156.

- Knack, S. (1997). Groups, growth and trust: cross-country evidence on the Olson and Putnam hypothesis. *Public Choice*, 117, 341-355.
- Knack, S. and Keefer, P. (1997). Does social capital have an economic payoff?" *Quarterly Journal of Economics*, 112, 1251-1288.
- Kranton, R. (1996). Reciprocal exchange: a self-sustaining system. *American Economic Review*, 86, 830-851.
- Kunce, M. and Anderson, A.L. (2002). The impact of socioeconomic factors on state suicide rates: A methodological note. *Urban Studies*, 39, 155-62.
- Kushner, H. I., and Sterk, C.E. (2005). The limits of social capital: Durkheim, Suicide, and social cohesion. *American Journal of Public Health*, 95, 1139-43.
- La Ferrara. (2002). Inequality and group participation: Theory and evidence from rural Tanzania. *Journal of Public Economics*, 85, 235-273.
- La Ferrara. (2003). Kin groups and reciprocity: a model of credit transaction in Ghana. *American Economic Review*, 93, 1730-1751.
- La Porta, R., Lopez-de-Silanes, F., Sheleifer, A., and Vishny, R. (1997). Trust in large organizations. *American Economic Review*, 87, 333-338.
- Lassen, D.D. (2007). Ethnic divisions, trust, and the size of the informal sector. *Journal of Economic Behavior and Organization*, 63, 423-438.
- Lederman, D., Loayza, N., and Menéndez, M. (2002). Violent crime: Does social capital matter? *Economic Development and Cultural Change*, 50, 509-39.
- Leigh, A. (2006a). Does equality lead to fraternity? *Economics letters*, 93, 121-125.
- Leigh, A. (2006b). Trust, inequality, and ethnic heterogeneity. *Economic Record*, 82, 268-280.
- Lourey, G.C. (1977). A dynamic theory of racial income differences. in Wallace, P. and La Mond. A.M. (eds). *Women, Minorities and Employment Discrimination*. Lexington, MA: Heath Publishers, 153-186.
- McMillan, J. and Woodruff, C. (1999). Interfirm relationships and informal credit in Vietnam. *Quarterly Journal of Economics*, 114, 1825-1320.
- Miguel, E., Gertler, P., and Levine, D., (2005). Does social capital promote industrialization? Evidence from a Rapid Industrializer. *Review of Economics and Statistics*, 87, 754-762.
- Montgomery, J.D. (1991). Social networks and labor-market outcomes: toward and economic analysis. *American Economic Review*, 81, 1408-1418.
- Munshi, K. (2003). Networks in modern economy: Mexican migrants in the US labor



- market. *Quarterly Journal of Economics*, 118, 549-599.
- Munshi, K. (2004). Social learning in a heterogeneous population: social learning in the Indian green revolution. *Journal of Development Economics*, 73, 185-213.
- Okazaki, T. (2005). The role of the merchant coalition in pre-modern Japanese economic development: A historical institutional analysis. *Explorations in Economic History*, 42, 184-201.
- Olson, M. (1965). *The Logic of Collective Action*. Cambridge: Harvard University Press.
- Olson, M. (1982). *The Rise and Decline of Nations, Economic Growth, Stagflation and Social Rigidities*. Yale: Yale University Press.
- Paldam, M. (2000). Social capital: one or many? Definition and measurement. *Journal of Economic Surveys*, 14, 629-653.
- Pena López, J.A., and Sánchez Santos, J.M. (2007). The Olson-Putnam controversy: some empirical evidence. *Economics Bulletin*, 26(4), 1-10.
- Petrou, S., and Krupek, E. (2008). Social capital and its relationship with measure of health status: Evidence from the health survey for England. *Health Economics*, 17, 127-143.
- Platteau, J.P. (1994). Behind the market stage where real society exist: Part II- the role of moral norms. *Journal of Development Studies*, 30, 753-815.
- Posner, R. A., and Rasmusen, E. (1999). Creating and enforcing norms, with special reference to sanction. *International Review of Law and Economics*, 19, 369-82.
- Putnam, R. (1993). *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton: Princeton University Press.
- Putnam, R. (2000). *Bowling Alone: The Collapse and Revival of American Community*. A Touchstone Book.
- Rainey, D.V., Robinson, K.L., Allen, I., and Christy, R.D. (2003). Essential forum of capital fro sustainable community development. *American Journal of Agricultural Economics*, 85, 708-715.
- Rauch, J.E., (2001). Business and social networks in international trade, *Journal of Economic Literature*, 39,1177-1203.
- Rauch,J.E., and Trindade,V. (2002). Ethnic Chinese networks in international trade. *Review of Economics and Statistics*, 84,116-130.
- Rebick, M.E. (2000). The importance of networks in the market for university graduates in Japan: a longitudinal analysis of hiring patterns. *Oxford*

- Economic Papers*, 52, 471-496.
- Routledge, B.R. and von Amsberg, J. (2003). Social capital and growth. *Journal of Monetary Economics*, 50, 167-193.
- Schmid, A.A. (2003). Discussion: social capital as an important lever in economic development policy and private strategy. *American Journal of Agricultural Economics*, 85, 716-719.
- Scott, J.C. (1976). *The Moral Economy of Peasant: rebellion and subsistence*. New Haven: Yale University Press.
- Sobel, J. (2002). "Can we trust social capital?" *Journal of Economic Literature*, 40, 139-154.
- Soubeyran, A., and Weber, S. (2002). District formation and local social capital: A (tacit) cooperation approach. *Journal of Urban Economics*, 52, 65-92.
- Sporleder, T.L. and Moss, L. (2002). Knowledge management in the global food system: network embeddedness and social capital. *American Journal of Agricultural Economics*, 84, 1345-1452.
- Udry, C. (1994). Risk and insurance in a rural credit market: an empirical investigation in northern Nigeria. *Review of Economic Studies*, 61, 495-526.
- Uslaner, E.M. (2002). *The Moral Foundations of Trust*. Cambridge University Press: New York.
- Vega-Redondo, F. (2006). Building up Social Capital in a Changing World. *Journal of Economic Dynamics and Control*, 30, 2305-2338.
- Vigdor, J.L., (2004). Community composition and collective action: Analyzing initial mail response to the 2000 census. *Review of Economics and Statistics* 86, 303-312.
- Wabha, J. and Zenou, Y. (2005). Density, social networks and job search methods: theory and application to Egypt. *Journal of Development Economics*, 78, 443-473.
- Western, J., Stimson, R., Baum, S., and van Gellecum, Y. (2005). Measuring community strength and social capital. *Regional Studies*, 39, 1095-1109.
- Whiteley, P. (2000). Economic growth and social capital. *Political Studies*, 48, 443-466.
- Yamagishi, T. (1986). The provision of a sanctioning system as a public good. *Journal of Personality and Social Psychology*, 51, 110-116.
- Yamagishi, T. (1988). The provision of a sanctioning system I the United States and Japan. *Social Psychology Quarterly*, 51, 32-42.

- Yamagishi, T., Cook, K.S., and Watabe, M. (1998). Uncertainty, trust, and commitment formation in the United States and Japan. *American Journal of Sociology*, 104, 165-194.
- Yamagishi, T., and Yamagishi, M. (1994). Trust and commitment in the United States and Japan. *Motivation and Emotion*, 18, 129-166.
- Yamamura, E. (2005). Social capital, human capital, and the dynamics of learning: The case of the development and the transformation garment industry in Bingo region. *Economic Review*, 56, 111-122. ( in Japanese).
- Yamamura, E. (2007 a). The market for lawyers and social capital: Are informal enforcing 'rules' a substitute for formal ones? mimeo.
- Yamamura, E. (2007 b). The impact of formal and informal deterrents on crime. mimeo
- Yamamura, E. (2007c). The effects of the social norm on cigarette consumption: evidence from Japan using panel data. MPRA paper 10176. University Library of Munich, Germany.
- Yamamura, E. (2007d). Heterogeneity, trust, human capital and productivity growth: Decomposition analysis. MPRA paper 10248. University Library of Munich, Germany.
- Yamamura, E. ( 2007e). The different impacts of socio-economic factors on suicide between males and females. MPRA paper 10175. University Library of Munich, Germany.
- Yamamura, E. (2008 a). Effect of informal social networks on the recent revival of Japan's film industry. *Journal of Socio-economics*, 37 (6), 2546-2555.
- Yamamura, E. (2008 b). The impact of formal and informal deterrents on driving behavior. *Journal of Socio-economics*. 37 (6), 2505-2512.
- Yamamura, E. (2008 c). Diffusion of home computers and social networks: A study using Japanese panel data. forthcoming in *Applied Economics Letters*.
- Yamamura, E. (2008 d). The effects of inequality, fragmentation, and social capital on collective action in a homogeneous society: Analyzing responses to the 2005 Japan Census. *Journal of Socio-economics*. 37 (5), 2054-2058.
- Yamamura, E. (2008 e). Learning effect and social capital: A case study of natural disaster from Japan. MPRA paper 10249. University Library of Munich, Germany.
- Yamamura, E. (2008 f). Dynamics of social trust and human capital in the learning process: The case of the Japan garment cluster in the period 1968-2005. MPRA paper 10251. University Library of Munich, Germany.

- Yamamura, E. (2008 g). Game information, local heroes, and their effect on attendance: the case of the Japanese Baseball League. MPRA paper 10303. University Library of Munich, Germany.
- Yamamura, E. (2008 h). Comparison of neighborhood trust between generations in a racially homogeneous society. A case study from Japan. MPRA paper 10218. University Library of Munich, Germany.
- Yamamura, E. (2008 i). Effect of linguistic heterogeneity on technology transfer: an economic study of FIFA football rankings. MPRA paper 10305. University Library of Munich, Germany.
- Yamamura, E. (2008 j). Who trusts others in a racially homogeneous society? A case study from Japan. *Economics Bulletin*, 26, 1-9.
- Yamamura, E. (2008 k). Effects of social norms and fractionalization on voting behavior in Japan. MPRA paper 10163. University Library of Munich, Germany.
- Zak, P.J. & Knack, S. (2001). Trust and growth. *Economic Journal*, 111, 295-321.