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**Geographical Political Economy of Regional Inequality
in Postwar Japan**

Daisaku Yamamoto

Department of Geography and Asian Studies Program
Colgate University
13 Oak Drive
Hamilton, NY 13346
U.S.A.

dyamamoto@colgate.edu

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Abstract

Currently dominant international development discourse strongly endorses the benefits of urban agglomerations for overall growth advantage, and reassures that accompanying regional disparities will be tentative, by referring to the experiences of regional convergence in industrialized countries. Yet, many of these countries, such as Japan, are suffering from growing regional problems. This paper hypothesizes that the contemporary regional problems in Japan cannot be isolated from how the country experienced regional convergence, and critically re-examine the postwar evolution of Japanese regional income inequality using the concept of developmentalism. I argue that redistribution policies/politics must be theoretically internalized more explicitly into the explanation of regional inequality. The Japanese experience shows that, in the context of a developmentalist state, growth policies became politically feasible only when accompanied by redistribution policies, and these policies, even if they were not intentionally spatial, had spatially differentiated effects. The findings of this study have important implications for those countries and regions that are embracing the dominant development discourse.

Keywords: Japan, regional inequality, developmentalism.

JEL codes: N95, P16, R11

Introduction

One of the central messages of the World Bank Report 2009 (World Bank 2009) was “go with flow,” meaning that policy makers in Global South should not be afraid of letting massive urban agglomerations spur because it offers overall growth advantages, and accompanying regional disparities will be tentative and will eventually contract. In various parts of the report, along with other heavily industrialized countries, Japan is cited as a showcase to illustrate such arguments (e.g., pp. xix, 11, 209). Tokyo offers massive benefits of agglomeration, while at the same time, the overall regional inequality converged with the progress of industrialization. Indeed Japan has been often portrayed as an egalitarian country both socially and spatially. But disparities (*kakusa*), or inequality (*fubyodo*), of various forms have become a major arena of domestic debate since the early 2000s. ‘Disparity books’ (*kakusa-bon*) became its own genre, exploring the nature, extent, causes and potential prescriptions for various socio-economic inequality and poverty in the recent years.¹ In parallel with this trend, some observers point to a worrying sign of rising spatial inequality and growing regional problems in the country.² Yet, such issues and concerns are largely neglected, or assumed irrelevant for the currently industrializing countries, to which the World Bank Report mainly speaks. Theoretically, this implies that the current regional problems in heavily industrialized countries are assumed unrelated to the earlier process of regional convergence.

The main motivation of this paper is to call this assumption into question through the (re)examination of the regional income inequality transitions in postwar Japan.³ My argument is that, seen from a geographical political economy perspective (cf. Sheppard 2011a, b), the

1. One can catch a glimpse of some of the major issues and debates in this literature in English articles, such as Ohtake (2008), Tachibanaki (2006), Kakamu and Fukushige (2005), and Hara (2011).

2. The literature on spatial inequality and regional distress (again, in mostly in the Japanese language media) is also large and growing rapidly. Some of these works focus on intra-urban inequality (e.g., Hashimoto 2011; Machimura 2009), while others focus on rural peripheries under a great stress economically, socially and environmentally (e.g., Odagiri 2009; Ono 2008). Yet some others cast doubt whether the level of regional disparities in Japan is significant enough to merit attention (e.g., Motani 2007a, b).

3. I adopt the definition of “inequality” as “average disproportionality” (Firebaugh 2003) whose successive increase/decrease results in (sigma) divergence/convergence. “Disparities” are understood as a broader concept which may manifest not only as increasing inequality, but also as distributional polarization (i.e., changes in modality) and destabilization (i.e., changes in mobility) (cf. Yamamoto 2008).

current state of regional problems is deeply rooted in the way in which the country experienced convergence within the ‘developmentalist’ framework (Murakami 1992 [1996]). In order to develop this argument, I first review the well-known inverse-U hypothesis (Williamson 1965), and its contemporary extensions that theorize a possible reversal of regional convergence, or the ‘Great U-turn,’ in industrialized economies.⁴ These explanations typically focus on technical (like the emergence of new industries) and economic (like trade liberalization) factors to account for the dynamics of regional inequality, and are complemented only by a crude underpinning of policy and political factors. I use the empirical account of postwar regional inequality in Japan by Fujita et al. (2004) as an example of such techno-economic explanations. I then briefly outline the concept of developmentalism, adopted in this paper, and suggest that redistribution policies/politics must be internalized more explicitly into the explanation of regional inequality transitions. The following empirical section of this paper first illustrates concrete forms in which developmentalist redistribution policies were devised and implemented in postwar Japan during the 1950s through the 1970s. This section also helps us challenge the notion of spatially neutral policies/institutions (which the World Bank Report endorses) under the developmentalist regime. The second empirical section highlights the interactions of “the political” and “the economy” that had important geographical implications in the post-1970s accumulation crisis period.

Theories of Regional Inequality Transitions

Inverse-U Hypothesis

The recent resurgence of economic literature on regional inequality and convergence has been critically motivated by the desire and ability to formulate models that are consistent with, usually equilibrium, economic theories, which can be then evaluated by econometrics (e.g., Barro and Sala-i-Martin 1995). These models typically predict a *unidirectional*

4. Contemporary geographers are often critical of cyclical theories, such as the inverse-U hypothesis, that inevitably evokes a pre-determined, single path of development and that potentially reduces spatial variation into historical sequence (Massey 2005). Such criticisms are well taken, but rather than rejecting cyclical theories all together, this paper explores mechanisms of a supposed inverse-U curve in a particular historical and geographical context, in this case, postwar Japan.

convergence or divergence, but are unable to offer much insights into historically and geographically variegated trajectories of regional disparities (Martin and Sunley 1998). Somewhere between the highly abstract models of convergence and purely descriptive empirics of regional inequality sits the famous Kuznets-Williamson inverse-U hypothesis (Kuznets 1955; Williamson 1965). The inverse-U hypothesis is essentially a theory of regional inequality transitions, formulated based on empirical observations of selected countries at various stages of industrialization (Williamson 1965). Despite its ‘age,’ this theoretical hypothesis remains popular among scholars of social and spatial inequalities (Alderson and Nielsen 2002; Candelaria 2009; Li 2011; Nielsen and Alderson 1997). Unlike more abstract, linear models of regional inequality, this ‘non-linear’ hypothetical model formulates why regional inequality first increases, then decreases, along the path of industrialization.

According to the original formulation of the inverse-U hypothesis, four main factors account for rising regional inequalities in the early stages of industrialization: imperfect mobility of labor, underdeveloped capital markets in poor regions, urban agglomeration economies, and government’s ‘pro-growth’ policy with limited equity concerns.⁵ Over time, however, each of these factors is hypothesized to alter its nature, and regional inequality begins to diminish. Labor becomes more mobile along with the development of spatially integrating infrastructure. Capital markets begin to develop in poor regions. Agglomeration diseconomies begin to take effect. Governments begin to pursue an active policy to transfer income to poor regions.

In the policy discussion, the historical presence of the inverse-U trajectories in industrialized countries is often cited as an empirical basis to justify and encourage further spatial concentration of economic activities in Global South—places that are believed to be in the early phase of industrialization (World Bank 2009). The hypothesis invokes an optimistic picture of ‘development’ where spatial concentration of economic activities, facilitated by ‘appropriate’ policy means, will eventually converge to a equilibrium in economic standings, and socio-political harmony (term that is regularly used in the East Asian development

5. Although it is not mathematically formulated, the inverse-U model can be seen as an eclectic mix of neoclassical theory (first and second factors), endogenous growth and agglomeration theories (third factor), and a quite benign ‘political theory’ (fourth factor).

discourse), across urban and rural regions of a country. In other words, it points to a non-contradiction between growth and equity policies.

Life after the inverse-U

In heavily industrialized Global North, an ongoing debate since the 1980s has evolved around the question over how to account for the seemingly intensifying regional disparities in ‘post-industrial’ societies (e.g., Harrison and Bluestone 1990). At least three general explanations have been advanced for this new, supposed round of inequality transition ‘beyond’ the inverse-U curve.⁶

New technologies and industries: The first explanation suggests that the emergence of novel technologies or industries generates a new round of divergence because of imperfect and temporarily lagged interregional integration of labor and capital markets between urban and rural areas of a country (i.e., dual markets). In this view, the recent phase of re-increase of regional inequality in industrialized countries, since around the 1980s, is the result of the emergence of information-intensive, service industries in urban areas, which require labor with novel skills that cannot be instantaneously cultivated in rural peripheries, and which are favored by proximity among economic agents (Yazawa 1999; Kaji 2006). Eventually, it is argued, labor and capital markets for the new industries become more integrated between urban and rural regions, resulting in the alleviation of regional inequality. Essentially, this view assumes a periodic (re)occurrence of the inverse-U dynamics, making Yazawa (1999) call it a ‘W-shape hypothesis.’

Globalization and hollowing-out: The Stolper-Samuelson theorem implies that globalization, either intensifying flows of trade or money capital, can increase regional inequality by giving a premium to ‘skilled’ labor, which tends to concentrate in a few, usually urban, areas of a country (e.g., Rodríguez-Pose 2010). That is, with increased trade openness

6. Another prominent explanation, especially in Japan, attributes the cause of increasing (primarily social) inequality to the change in the demographic composition of the population (Ohtake 2005). With the aging of population, according to this view, overall income inequality inevitably increases because the elderly population segment, which is expanding rapidly in Japan, ‘naturally’ shows a larger variation of income levels than the younger segment. Few studies to date have shown, nevertheless, whether this phenomenon plays a critical role in explaining regional inequality in Japan (see Toyoda (2010) for an attempt to uncover this question).

in industrialized countries where low-skilled labor is relatively scarce (compared to a non-industrial or industrializing country), the price of low-skill intensive products declines and so do the wages of (now) redundant low-skilled workers, resulting in increased *social* inequality. If these low-skilled workers are spatially concentrated in particular regions, then regional inequality will also increase as a result.⁷ Actual effects of international trade on wages and regional wage inequality have been subject to much debate and empirical analysis (e.g., Rigby and Breau 2008).

Rolling-back welfare state: Those who emphasize the significance of recent, market-oriented reforms (or more broadly neoliberal reforms) highlight the political nature of social as well as spatial inequalities. Often in response to the sluggish national economic performance and intensifying international competition since the 1970s, an increasing number of industrialized countries began to alter their policies and institutions that were considered inept for a free market economy. Harvey (2005) shows that under the name of overcoming the crisis of capital accumulation, neoliberal reforms typically end up restructuring the system of wealth redistribution (to enrich the rich further) rather than generating wealth itself. As assumed in the inverse-U model, the state still holds power to influence income redistribution, but what happens now is the central government exercising its power to withdraw from “the luxury of equality in the geographic distribution of income” (Williamson 1965, p. 9).

It is unrealistic to assume that only one of these ‘extended explanations’ of the inverse-U hypothesis accounts completely for actual regional inequality transitions in a given country. An empirical account of historical transitions of regional inequality typically employs these explanations in combination as shown below.

7. The Stolper-Samuelson theorem assumes that labor and capital are mobile within a country, but not internationally. When labor, capital or both are also assumed mobile across international borders (as they are, almost by the definition of globalization), predictions become more complex. Nevertheless, the essential mechanism of growing regional income inequality in an industrialized country remains the same; low-skilled labor becomes more redundant (hence lower real wages).

Towards geographical political economy of regional inequality transitions in Japan

Prevailing empirical explanations of regional inequality transitions

Let us first look at a trajectory of the postwar regional inequality, and prevailing empirical explanations, using the work of Fujita et al. (2004) as an example (see also Fujita and Tabuchi 1997; Hatta and Tabuchi 1995).⁸ Figure 1 shows the changes in prefectural per capita income inequality between 1955 and 2008, using the Theil index, along with the GDP growth rates and net migration counts to the three major metropolitan areas (Tokyo, Nagoya and Osaka). Fujita et al. identify three ‘cycles’ of divergence and convergence, each corresponding to a unique “regional structure of economic activity” (p. 2912), in the postwar period. The first is the period of rapid divergence in the latter half of the 1950s, followed by a quite dramatic convergence until the mid 1970s. This period corresponds to the high-growth period of the national economy. The second cycle, with its inequality peak in 1989, runs from the mid 1970s to the mid 1990s, corresponding to the period of moderate growth until the collapse of the bubble economic boom. The third, most recent cycle seems to have taken place since the mid-1990s, during the period of staggering national economy, with the apparent inequality peak in 2005. The net migration to the metropolitan areas seems to generally follow the inequality trends, where rising regional inequality is associated with rising net rural-to-urban migration, although the association seems to have become weaker in recent decades.

8. I use their work because it is one of the few accounts, available in English, that offers historical and synthetic narratives of regional inequality in Japan, rather than simply testing a mathematical model of convergence. Needless to say, a single work cannot represent the rich literature on regional inequality in Japan. For quantitative analysis of Japanese regional economic disparities, see Kataoka (2008, 2010), Akita (2003), Banasick and Hanham (2006), Gauthier et al. (2010), Kakamu and Fukushige (2005), Abe (1991), Yugami (2010), Kaji (2006), Urakawa (2009), and Yazawa (1992).

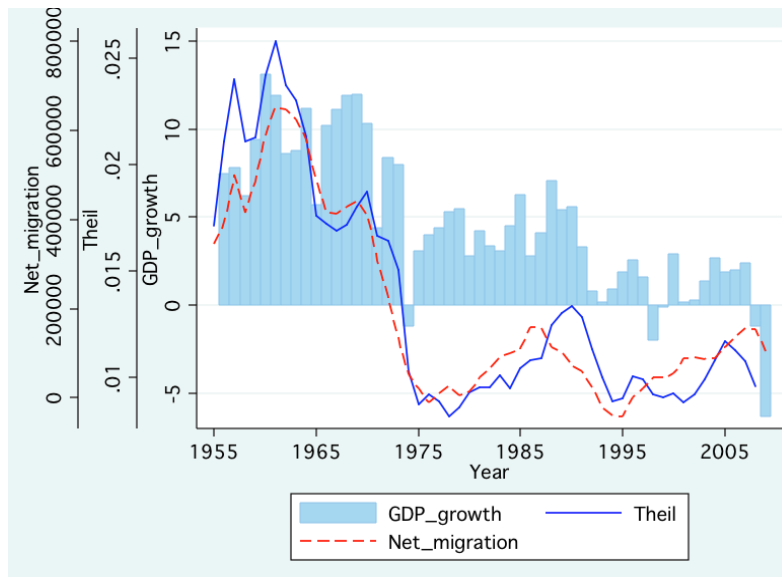


Figure 1: Regional inequality (Theil index based on prefectural per capita income), net migration to three major metropolitan areas, and GDP growth rate, 1955-2009

Source: Prefectural Economic Accounts (various years), National Economic Accounts (various years), Census

Notes: 47 prefectures in Japan, except that Okinawa is not included in the data until 1972 as it was under the U.S. occupation.

The explanations of the observed regional inequality change by Fujita et al. can be roughly summarized as follows (Fig. 2). The first cycle, they argue, closely follows the logic of Williamson's inverse-U hypothesis. The main geographical dynamics is industrial growth and the concentration of secondary and tertiary industries into the three metropolitan areas (especially Tokyo and Osaka) until the early 1960s. In particular, manufacturing sectors such as electrical, machinery and material (such as steel and petrochemical) industries concentrated in metropolitan areas due to their technological linkages and market access. This was followed by the dispersion of these industries (especially land-intensive industries such as petrochemical sectors) to the surrounding areas due to the rising factor prices (both land and labor costs), forming the *Pacific Manufacturing Belt* by the early 1970s.

In the second cycle, the reduction of domestic and international transportation and communication costs, combined with rising yen, oil prices, severe pollution problems and global financial liberalization, caused (1) the shift in the leading industries to high-tech, producer-service and information-technology industries, (2) the relocation of labor-intensive production to overseas, (3) the strengthening of managerial functions (especially of multinational corporations), and (4) the growth of financial industries. These factors, roughly

corresponding to the first and second extended explanations of the inverse-U hypothesis (i.e., new technologies/industries and globalization/hollowing-out), resulted in the ‘unipolar’ growth of Tokyo because most of transportation networks were developed with a focal node in Tokyo. For Fujita et al., this represents a formation of a new stable spatial equilibrium, the Tokyo unipolar structure, triggered by the lowering of transportation costs, an insight that they consider fits well to geographical economic models.

Because of the recency of the third cycle (their data go up to 2001), Fujita et al. offer only a tentative account of this cycle. They speculate that “the establishment of most new mass-production plants overseas, by skipping the peripheral regions of Japan, may partly explain the recent renewed trend in the increasing regional income differentials” (p. 2951). They reject the speculation of the third cycle being a continuation of the second cycle, temporary suspended by the severe recession, and conjuncture that this is a new round of regional transformation (i.e., unipolar ‘re-growth’ of Tokyo). They base this reasoning on the fact that the correlation between the rate of net migration to the metropolitan areas (especially Tokyo) and the national GDP growth rate, which was present in the previous two cycles, is no longer apparent in the third cycle.⁹

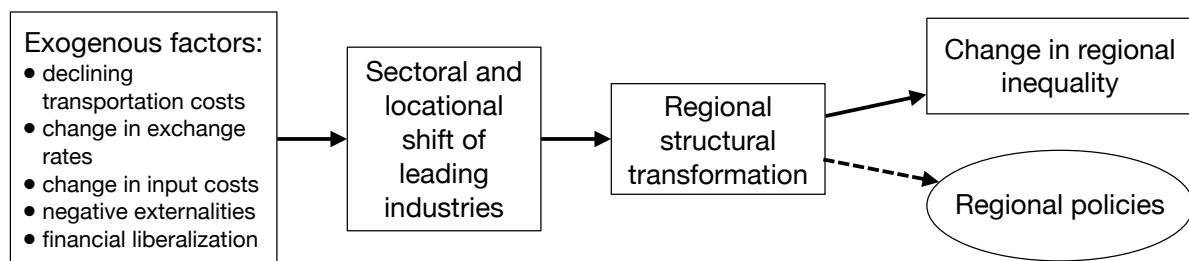


Fig. 2: Schematic logical structure of Fujita et al. (2004)

Source: author

9. Tabuchi (1988) examined the directional causality, using Sim’s test, between urban/rural income differential and net migration for 1954-84, and found that changes in interregional income differentials precede those of net migration (i.e., income inequality ‘causes’ migration, but not vice versa). In addition to the correlation between growth and migration, this correlation between inequality and migration also appears increasingly tenuous in the recent decades.

Limits of the prevailing account

I characterize the account of Fujita et al. (2004) as a kind of extended inverse-U theory with a particular focus on the locational dynamics of leading industries (Fig. 2). Their explanation works reasonably well for the first cycle, or even up to the earlier phase of the second cycle. However, its limitations and deficiencies seem increasingly evident, especially in accounting for the more recent regional inequality transitions.

First, their account associates regional inequality changes to distinct rounds of *regional structural transformation*, which is essentially equated with shifts in leading industries. In other words, the prevailing logic is that shifts in leading industries lead to regional structural transformation, which are then captured by changes in regional inequality (indices). In this way, their account resembles those of Yazawa (1997) and Kaji (2006). However, the roles of leading industries seem progressively ambiguous in the recent decades. For example, in Fujita et al. (2004), the first cycle is explained largely by the initial concentration and subsequent dispersion of manufacturing industries. The divergence phase of the second cycle (i.g., lone growth of Tokyo) is associated with new leading industries, such as high-tech and producer services; however, the convergence phase of this cycle is *not* associated with the spatial dispersion of these industries. Rather, they attribute the end of this cycle to the “severe and prolonged recession enhanced by structural problems in the traditional financial and land market sectors” which curtailed in-migration to Tokyo (p. 2923). Furthermore, their account is largely silent about the roles of leading industries during the third cycle of regional inequality (and whether leading industries are in fact different from those in the second cycle). I take this as a sign of growing difficulty of inferring and theorizing regional inequality transitions directly through the shift in leading industries.

Second, Fujita et al. takes a rather narrow, producer-oriented view of ‘globalization’ where the increased international competitive pressure, spatial integration through transportation and telecommunication technologies, and growing opportunities for overseas production by the Japanese firms (p. 2921) force domestic firms to focus on knowledge-intensive and high value-added activities to which urban agglomeration economies provides particular advantage (hence reinforcing the unipolar growth of Tokyo). Their account gives little attention to the effects of financial, often speculative, capital flows, whose growing significance in the contemporary global economy needs no elaboration. Even when they mention “financialization of the global economy,” they mostly associate it to the growth of

the financial *industry* in Tokyo. They also pay comparatively little attention to potential spatial ramifications of labor-intensive, imported products and of low-wage international migrants, which are major points of debate in the literature on socio-spatial inequality in the United States and Europe. In short, their account seems to overlook a broader range of other ‘globalization’ factors.

Third, Fujita et. al make decision to limit their attention to the roles of the state, politics and policies, saying that “...several national comprehensive plans played a role in facilitating the relocation of industrial complexes, although their true economic impacts are uncertain and are difficult to measure..., [and] the government policies usually follow, rather than precede, the actual transformation in the structure of industries...” (Fujita et al. 2004; p. 2920). A similar view is shared by others such as Yazawa (1997) who suggests that Japanese regional policies aiming at spatially ‘balanced national development’ (central theme of the postwar national land development plans) were largely ineffective. When Fujita et al. do touch on the role of political factors, they are mostly treated as a backdrop of the changing global economic environment. There are three problems with these views. First, policies that affect regional inequality are not limited to explicitly spatial policies such as those national comprehensive plans (e.g., Mutlu 1991). Second, even if government policies usually temporally lag actual regional transformations which they intend to affect, those policies may have (sometimes unintended) consequences in the *future rounds* of regional transformation. Third, their account has a risk of treating politics as an inconvenient reality (cf. Maringanti et al. 2009) when political motivations arguably plays a central role in growing inequality under the name of market-oriented reforms today (Harvey 2005).

Geographical political economic perspective

Rather than simply complementing the account of Fujita et al. by adding ad-hoc explanations for the recent changes in regional inequality, I wish to revise the account of regional inequality transitions in postwar Japan from a geographical political economy perspective. A geographical political economy perspective postures that a capitalist economy is “conflictual and unstable, incapable of solving its own internal problems and productive of the very socio-spatial inequalities that its proponents believe it can (at least in principle) overcome” (Sheppard 2011a, p. 320), and embodies “different alignments of agents

struggling over the disposition of the economic surplus” (Sheppard 2011b, p. 63).¹⁰ In order to recast the prevailing account of the postwar regional disparities in Japan from this perspective, I adopt the notion of *developmentalism*, as used in Murakami (1992 [1999]), as a point of departure.¹¹ Developmentalism is best thought as a regime of accumulation (like Fordism) that is characterized by “an economic system that takes a system of private property rights and a market economy (in other words, capitalism) as its basic framework, but that makes its main objective the achievement of industrialization (or a continuous growth in per capita product), and insofar as it is useful in achieving this objective, approves government intervention in the market from long-term perspective” (p. 145). It is crucial to note that the intervention of a developmentalist state takes form of both growth policies *and* redistributive policies, although the latter policies are often overlooked in the discussion of developmentalism (Suehiro 1998).

One of the unique aspects of developmentalist redistributive policies is that they are often linked to production activity or to price formation (Murakami 1992, p. 196; also see Estévez-Abe 2008). That is, developmentalist redistributive policies tend to redistribute income to economic agents (e.g., business owners, firms, and municipalities) in order to preserve and promote production activities, rather than redistributing ‘lump-sum’ payments to help consumptive power of individuals in need (i.e., ‘normal’ method of the welfare state). In this sense, in a developmentalist state, even redistributive policies tend to take a form of productionist, or ‘mini-growth,’ policies. Neoclassical economic thinking would criticize such redistributive policies because they distort the working of the market-based resource allocation. Although developmentalist redistribution policies may lower the overall efficiency of the economy, they are justified when they are believed to facilitate growth in the long-run. As will be shown below, these redistributive policies are not always spatial/regional policies, but they often have strong spatial ramifications and act as quasi-spatial redistributive policies

10. Political economic approach to regional disparities and uneven development is far from new among Japanese economic geographers and economic geographers alike, and my analysis builds on these earlier contributions, but also extends them by using developmentalism as the basic theoretical framework with a particular focus on redistributive policies and politics, by contemplating why regional inequality has *not* risen as high in the post-1970s period as in the 1960s, and by drawing on broader theoretical and policy implications.

11. Suehiro (1998) offers another conceptual overview of developmentalism. His definition of developmentalism has a more strong emphasis on the importance of ideological integration of the nation than Murakami’s.

(DeWit and Steinmo 2002). Finally, one of the most difficult challenges in the developmentalist regime is to end ('sunset') redistributive policies that can no longer be offset by the overall productivity growth.

My interpretation of regional income inequality transitions differs most importantly from the prevailing accounts, such as Fujita et al. (2004), for its emphasis on the mutual (or 'dialectical') interactions of 'the political' and 'the economy' within the context of developmentalist state (Fig. 3). The basic theoretical premise is simple. In a developmentalist state, an aggressive pursuit of growth typically requires spatial concentration of capital and labor in leading sectors in a limited range of areas. Yet, to make such a sectoral and spatial concentration (=inequality) politically feasible within some form of democracy, some compromise must be made with a broad spectrum of socioeconomic groups and regions. One of the ways in which this compromise is made is by instituting developmentalist redistribution mechanisms, which may take various forms, such as a focus on public infrastructure investment in specific regions; tolerance for economic activities of relatively low productivity (typically in peripheral areas) in order to promote leading industries; and inclination to mitigate regional disparities by promoting industrialization of rural regions, rather than controlling urban growth (cf. Murakami 1992; Calder 1992). Nevertheless, when the existing regime faces accumulation crisis by internal and external factors, certain elements of redistribution mechanisms are likely identified as the 'barriers' against a renewed round of capital accumulation. New forms of growth and redistribution policies, informed by the interpretations of the crisis, will then be negotiated and fought over by different alignments of agents. In short, this theoretical perspective makes it essential to trace and unfold the conflict-ridden interactions among key 'moving objects' (e.g., socio-economic conditions, and policies and politics), and understand regional inequality as part of this political economic dynamics.

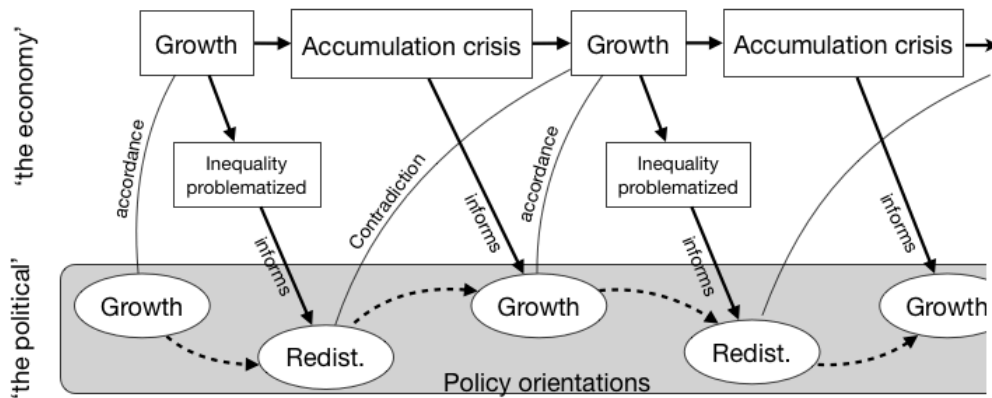


Fig. 3: Schematic logical structure of this study

Source: author

Consolidation of developmentalist state

In order to provide a political economic interpretation of the ‘first’ cycle (Fujita et al. 2004), which extends from 1955 to the mid 1970, I divide this period into three sub-periods. This period supposedly follows most clearly the inverse-U hypothesis (Williamson 1965). Besides the inequality index, another way to describe the geographical trait of regional disparity during this period is the spatial autocorrelation index (Moran’s I), which essentially captures the clustering of similar per capita income levels *among* nearby prefectures (Fig. 4).¹² During this period, Moran’s I index rises until the early 1970s, followed by a rapid decline. This change is consistent with the dominant explanation of the formation and dissolution of the Pacific Manufacturing Belt, which was seriously impacted by the oil crisis in the early 1970s (Fujita et al. 2004; Matsubara 2007; Yamazaki 1998). Figure 5, maps of prefectural per capita income in 1955 and 1961, offers a cartographic impression of how high-income prefectures were formed along the axis of Tokyo-Osaka-Fukuoka over this period.

12. Smith and Dennis (1987) used a similar approach in discussing the dissolution of the U.S. Manufacturing Belt.

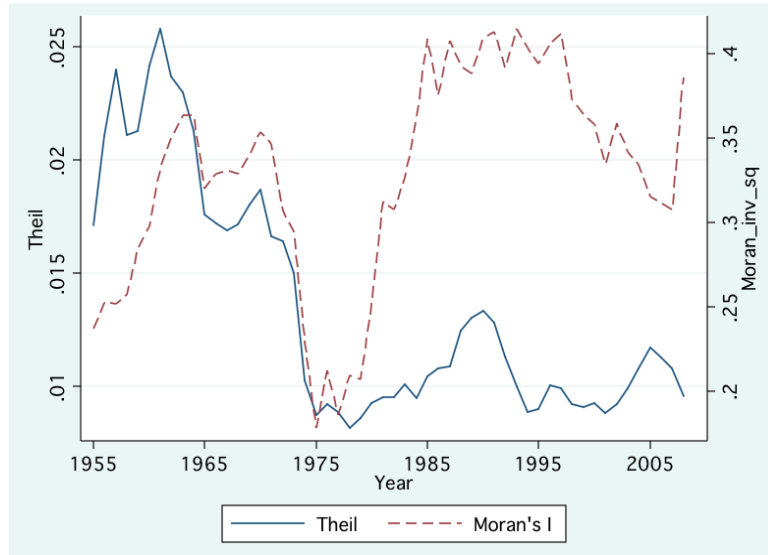


Fig. 4: Regional inequality and clustering index (Moran's I)

Source: Same as for Fig. 1

Note: Moran's I index is calculated using the 'inverse distance squared' rule to define spatial relationships among prefectures. Nevertheless, using different rules (such as inverse distance and feature contiguity) does not alter the overall trends of the index substantially.

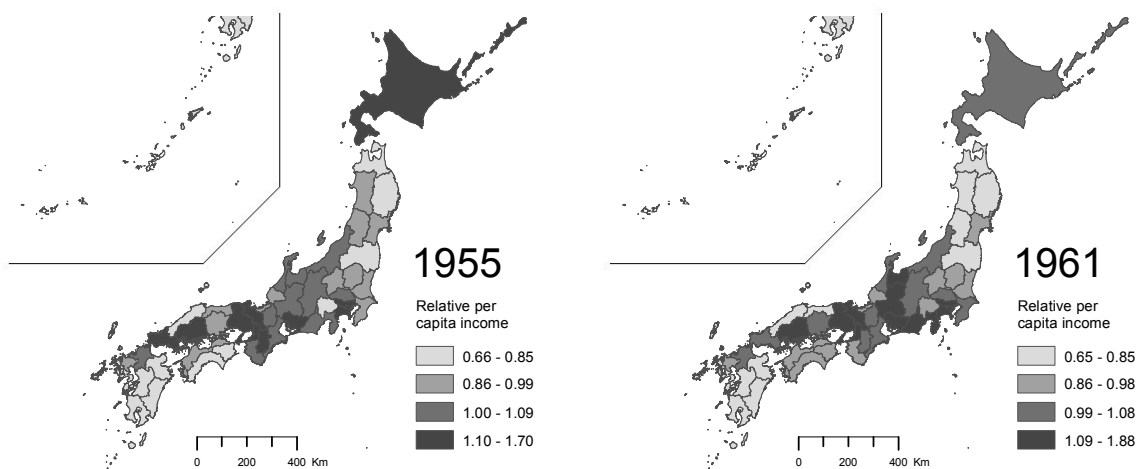


Fig. 5: Relative per capita income by prefecture, 1955 (left) and 1961 (right)

Source: Same as Fig. 1

Notes: Prefectural per capita income data are classified using quartiles. The average of all prefectural per capita income is 1.0. Darker shades indicate higher income levels.

Growth first and foremost (mid 1950s-early 1960s)

This is the phase in which both inequality and clustering intensified rapidly. The relatively low regional inequality as of 1955 reflects the fact that the war destroyed large stocks of productive capital in the four major industrial areas established before the war, including Kita-kyushu (around Kita-Kyushu City), Hanshin (around Osaka City), Chukyo (around Nagoya City), and Keihin (around the Tokyo metropolitan district).¹³ Many manufacturing industries moved away from these traditional urban industrial areas to obtain scarce resources and energy that were still available domestically, resulting in some equalization of productive capital in the immediate post-war era around 1945 to the early 1950s (Kato 2003). Hence, the divergence and clustering in the latter half of the 1950s indicates massive capital investment *returning to and around* the traditional industrial areas, especially Tokyo and Osaka, fueled by the procurement boom by the Korean War (1950-53), where growing sectors ranged from steel, machinery, and shipbuilding sectors, to newly emerging petrochemical sectors (Kato 2003). During this period, a rural exodus to metropolitan areas skyrocketed, which began to worry communities in the peripheral regions.

It has been debated whether state-led industrial growth policies were effective or not in the early postwar period (e.g., Miwa and Ramseyer 2002); yet the fact remains that the Japanese government prioritized public infrastructure investment in the metropolitan areas to facilitate growing industrial activities until the early 1960s (Morichi et al. 1999). This is not to say, however, that there was no initiatives for redistribution policies that pertain to regional disparities prior to this period. For example, the Comprehensive National Land Development Law was already enacted in 1950. This law was originally envisioned as a legal basis to promote regional economic development projects for a few specially designated rural areas, in a similar manner to the Tennessee Valley Authority. However, the original vision was eroded by the pressure from some powerful bureaucrats who objected to prioritize a few selected regions, local political and business elites who voiced and scrambled to get the designation, and the United States which pushed for economic independence of postwar Japan based on heavy industrialization (Okada et al. 2007). As a result, ‘comprehensive

13. Because the industrialization of Japan was already under way before the Second World War, it is technically inaccurate to describe that the observed divergence between 1955 and the early 1960s represents the phase of early industrialization and regional divergence in Williamson’s inverse-U hypothesis. Nevertheless, for the purpose of this paper, this historical fact does not affect the main arguments.

development' became just a name, and only the development of power sources for heavy industrialization, such as dam construction, was seriously promoted by the beginning of the 1960s. Although economic growth (=recovery) was prioritized after all, it is noteworthy that the underlying drive for developmentalist redistribution was already present during this period.

Developmentalist redistribution policies under negotiation (early 1960s-early 1970s)

During this phase, regional inequality began to drop, but overall spatial clustering continued to increase, albeit not as rapidly as in the previous phase, indicating the consolidation of the Pacific Manufacturing Belt by the early 1970s. Some authors consider the drop in regional inequality at this timing is indicative of ineffective government policies to mitigate regional inequality because many of the most important inequality-dumping policies and plans did not come at least until 1962 when the first Comprehensive National Development Plan (*Zenso*¹⁴) was enacted (Yazawa 1999). I consider this period as the time that the nature of developmentalist redistribution policies was being negotiated and fought over.

Okada (2005) reveals that originally the administration considered under the *Zenso* to channel further investment to the emergent Pacific Manufacturing Belt, where industries had been already agglomerating, but the idea met a fierce backlash by politicians and local elites from rural regions which were staggered by the outflow of their population (including first sons who traditionally succeeded households in Japan). A large inequality between the urban and rural areas was now a widely-held public perception (even through regional inequality was starting to drop numerically). The Japanese economy as a whole was still growing rapidly, and the government maintained a favorable fiscal balance with recorded deficit only in 3 years between 1955 and 1974 (Fig. 6). These circumstances made it difficult politically

14. In the World Bank Report 2009, this is referred to as “Integrated Spatial Development Plan” (p. 209). This plan was to be followed by four successive plans in latter years (1969, 1977, 1987, 1998). These plans and associated policies have been studied, and their problems and outcomes greatly scrutinized and debated, in the planning and related literature to date (e.g., Honma 1992; Yamazaki 1998; Yada 1996, 1999; Okada et al. 2007 just to name a few).

to defend the funneling of resources into the Pacific Belt, and hence laid ground for developmentalist redistribution policies.

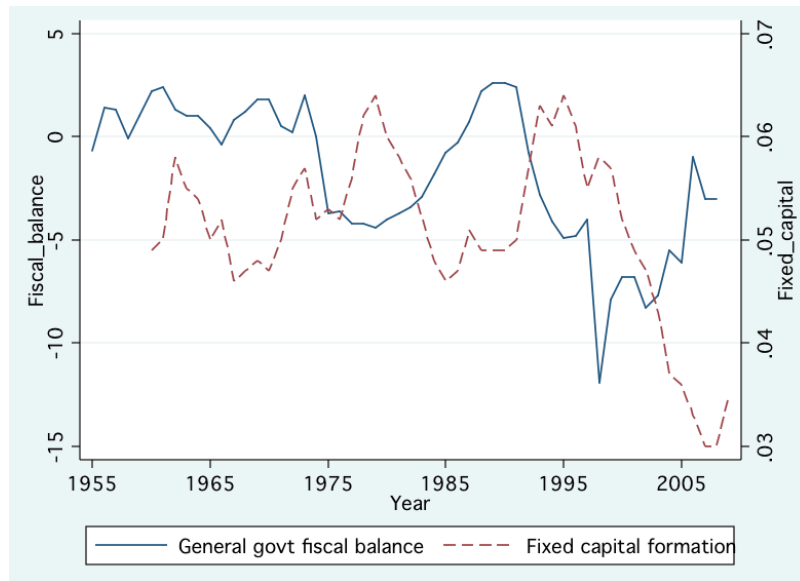


Fig. 6: General government fiscal balance (% of GDP) and fixed capital formation by the general government (% of GDP)

Sources: National Accounts of OECD Countries, and National Economic Accounts

After all, the Plan proclaimed its goal “... to develop a welfare state in which all regions and all nation live equally affluent life and enjoy modern benefits” (1962). Indeed, although each of the successive Comprehensive National Development Plans (1969, 1977, 1987, 1998) adopted unique visions, goals and emphases, ‘balanced development of the national land’ and ‘reduction of regional disparities’ were consistent themes of the plans (Yamazaki 1998). One of the main projects, derived under the Plan, was the establishment of “new industrial cities” (based on the Law for Promoting Establishment of the New Industrial Cities: NIC Law, 1962). The idea that the reduction of regional disparities would be achieved by the industrial growth of peripheral regions makes this project very much ‘developmentalist’ as defined above.

Originally ten areas were envisioned to become such cities, but total of 44 areas were proposed by various local governments. After fierce lobbying activities in Nagata-cho (where the National Diet and major political party offices are located), 15 areas were designated as new industrial cities between 1964 and 1966, and became the targets of massive public

infrastructure investment, including roads and ports (Honma1992). In stark contrast to a positive portrayal of the *Zenso* and the NIC projects in the WB Report 2009 (World Bank 2009: p. 209), most commentators agree that the projects failed to deliver expected outcomes, where some designated cities failed to attract sufficient number and quality of firms while others struggled with serious environmental problems (Miyamoto 1973; Honma 1992). Furthermore, Honma (1992) points out that the NIC Law nurtured and fostered a particular mentality among local government officials, where they came think of “regional development” as something that they can achieve by incorporating themselves into national projects.

There were other laws and policies, established during this period, that did not directly aim to reduce regional disparities, but nevertheless functioned to do so (Han 2010; Mutlu 1991). These may be called ‘quasi-spatial’ policies, and include a series of laws to protect and promote small and medium size firms (e.g., Basic Act for Small and Medium-sized Enterprises, 1963), farmers (e.g., Agricultural Basic Act, 1961), and commercial establishments (Large-scale Retail Store Law, 1973). These policies had spatially differentiated effects in so far as the policy subjects were distributed unevenly. It is important to note that these policies, while claiming to raise the productivity of the subject activities, allowed intervention in markets. In particular, the Agricultural Basic Act explicitly justified the need to control prices of agricultural products.¹⁵ In addition, the rapid growth of the national economy accelerated the rise of land values, including areas around the new industrial cities. It made sense for many farmers to sell off their land, rather than putting their efforts to raise agricultural productivity (Miyamoto 1972). In short, the agricultural policies of this period were very much subordinate to the industrial growth policies, and opted for tentative protection of farmers through price controls, rather than resolutely assisting them to increase productivity. These policies had resounding effects later on.

Accumulation crisis (1970s)

During this phase (around 1970-1977), both regional inequality and clustering indices show a rapid decline. This is the time that the national economic growth slowed down dramatically, in part triggered by Nixon shock (1971) and oil crisis (1973-74). Heavy

15. As a result, the price of rice began to deviate from the consumer price index from 1962.

material-based industries and petrochemical industries, heavily dependent on cheap oil, suddenly curtailed their productivity (Fujita et al. 2004; Matsubishi and Togashi 1988). Industrial complexes of these industries lost their competitiveness, and rural-to-urban migration slowed down. The number of decentralized manufacturing plants was on the rise in the 1970s (e.g., Yamaguchi 1982). The decline in Moran's I index reflects a temporary 'disorder' of the regional structure.

In terms of regional policies, the Second *Zenso* (or *Shin Zenso*) was approved in 1969. Industrial dispersion was still a major goal, and the expansion of transportation networks was the means to achieve that end (Honma 1991; Yamazaki 1998). Okada (2005) asserts the shape of a "construction state (*Doken Kokka*)" became crystalized, which is evidenced in the rising rate of fixed capital investment per GDP during this period from 4.8% in 1969 to 6.4% in 1979 (Fig. 6). In 1972, Kakuei Tanaka, who later became the prime minister, published a controversial book, "Japanese Archipelago Remodeling Plan (*Nihon Retto Kaizo Ron*)," which envisioned a radical transformation of the regional structure of Japan, one of which was to foster industrialization of the then predominantly agricultural northern part of Japan (from which he was originated) through massive construction projects. The publication of the book triggered a speculative rise of land prices in various parts of the country. In 1977, the Third *Zenso* was approved. While this *Zenso* is sometimes applauded for its explicit attention to environmental issues and the improvement of quality of life in rural areas, it nevertheless preserved much of its earlier emphasis on industrial dispersion through transportation network development. Indeed, there was little change in the developmentalist nature of regional policies during this period. As an indication, as soon as the Japanese economy began to recover from the recession (period?), developmentalist redistribution policies/politics, such as seen in the "technopolis" projects in the early 1980s, resumed.

Rolling-back developmentalist state

From the mid-1970s, the Japanese economy entered a phase of slower growth. Regional inequality gradually increased during this period, with a particularly rapid surge between 1986 and 1991, a period of bubble economic boom. This is the time when the Tokyo metropolitan area (Tokyo and surrounding prefectures) gained its prominence, and is reflected in the increasing Moran's I (Fig. 4; also see Fig. 7). The collapse of the bubble

economic boom resulted in the sudden fall in regional income inequality starting 1991. The fact that the divergence was so tentative indicates, I suspect, that the increased regional inequality reflects, or amplified by, non-structural factors, such as speculative property investments (also see Yugami 2010).¹⁶

Furthermore, despite the notable drop in the inequality level, the Moran's I index does not show a dramatic change during this period (around 1991-2000). I take this as a sign of relatively stable regional structure, where the dominance of Tokyo continued uninterrupted, unlike Fujita et al. (2004) who assert that there was a new round of regional transformation starting the mid 1990s. The most recent surge in regional income inequality in the early 2000s has been accompanied by a decline in Moran's I index, which may suggest a time of regional structural instability.

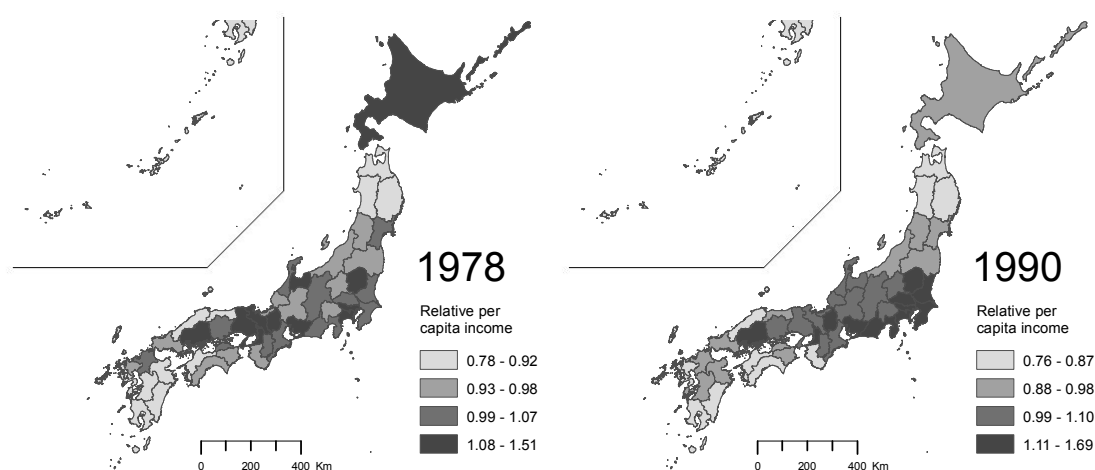


Fig. 7: Relative per capita income by prefecture, 1978 (left) and 1990 (right)

Source: Same as Fig. 1

Note: Prefectural per capita income data are classified using quartiles. The average of all prefectural per capita income is 1.0. Darker shades indicate higher income levels.

Political restructuring postponed (1980s)

The emergence of knowledge- and information-intensive industries, is widely discussed as a major factor of the growing regional inequality, most significantly influenced

16. For similar arguments in the U.S., see Sharewood-Call (1996).

by the unipolar growth of Tokyo, during the 1980s.¹⁷ Although I do not deny the role of these industrial shifts, here I focus again on the political response to the perceived challenges and opportunities of the new around of capital accumulation. First, increasing international competition in manufacturing and growing fiscal deficits (Fig.6) became increasing concerns for the government. This situation prompted the government to enact various reform initiatives, including the second Provisional Commission on Administrative Reform (PCAR) under the mantra of “fiscal reconstruction without tax increase” in 1981. The Nakasone administration (1982-1987), which followed up the initiatives of the second PCAR by establishing the Provisional Administrative Reform Promotional Council in 1983, implemented a series of reforms that closely resembled the contemporary neoliberal reforms by the Reagan and Thatcher administrations. The most well-known achievement was the privatization of three major national corporations: Japan Tobacco and Salt Public Corporation, Japanese National Railways, and Nippon Telegraph and Telephone Public Corporation.

Second, the Nakasone administration also attempted to reform (i.e., reduce expenditures for) policies on public work, social security, education, and agriculture. However, many of these neoliberal reforms met stiff oppositions within the Liberal Democratic Party (LDP) and fell through prematurely in Japan (Watanabe 2007, p. 298-299). In particular, compared to other heavily industrialized countries, the Japanese economy recovered relatively quickly from the oil crisis, and its fiscal balance restored a balance by the mid 1980s (Fig. 6). In other words, Japan had not yet faced a severe crisis of capital accumulation, which typified the situations in welfare states under Fordist-Keynesian regimes such as the United States and United Kingdom (e.g., Brenner 2004), precisely because the developmentalist regime provided Japan with globally competitive advantage (Watanabe 2007).

The Technopolis Program is an example of an industrial growth policy turning into a quasi-redistribution policy. The program, envisioned and carried out by the MITI, was institutionalized by the establishment of the so-called Technopolis Law in 1983. The original architects of the Program envisioned to establish one or two ‘technopolies’ in the country,

17. See Hatta and Tabuchi (1995) for a neoclassical take on the unipolar growth of Tokyo, and Machimura (1992) and Waley (2007) for more political economic accounts of the urban restructuring process in the city.

where knowledge-intensive, high-tech firms and institutions (e.g., research universities) would cluster to help the transformation of the country's industrial structure (Fujita 1988; Masser 1990; Suzuki 1998; Takeuchi 2006). Yet, under the pressure of local governments, a total of 26 areas throughout the country were designated by 1987. Although the program did not involve large-scale, direct financial interventions (i.e., income transfer) by the national government, bureaucrats in Tokyo had a tight control over the project design and decision making processes. As a result, local governments bore heavy financial responsibilities, yet, the actual projects became much the same across designated areas where attracting high-tech firms became a major focus. As a whole, the Technopolis Program was hardly a successful industrial growth policy, and it looked and functioned more like a developmentalist redistribution policy in practice because it redistributed income (1) to achieve 'mini-growth' in rural areas, (2) by focusing in on leading industrial sectors ('tolerating' lower productivity of non-leading sectors) (3) through facilitating infrastructure-building projects. To be sure, it was not a 'normal' redistribution policy because it did not intend to 'help' the socio-economically most disadvantaged social groups or regions, and it 'skewed' market mechanisms.

By the mid 1980s, there was not a sufficiently strong, internal momentum for 'sun-setting' developmentalist redistribution in Japan. However, the situation was beginning to change from the mid 1980s, and was importantly influenced by the outlook of the world political economy, especially that of the United States. Struggling with the 'twin deficits,' the United States pushed forward the agenda of reevaluating the yen at the Plaza Accord (1985), with a clear objective to solve their own domestic dilemma. At the same time, the United States demanded Japan to open up its border for foreign imports and to expand domestic consumption of goods and services, in order to deal with "Japan's \$100 billion annual trade surplus with the rest of the world" (Williams 2002, p. 59). The Japanese government's response to this call is clearly illustrated in the Maekawa Report (1986), which called for "a historic transformation of the existing economic policies and the national life style" (my translation). For the most part, the report embraced the demand by the United States, and upheld economic growth led by domestic consumption, urban redevelopment, increased inward and outward FDI, restructuring of the primary sectors, promotion of imports, and liberalization of financial markets. In many ways, the Maekawa Report offers a blueprint for the shape of the country in the post-developmental period. Nevertheless, drastic political

and economic reforms had to wait until the collapse of the bubble economic boom. Indeed, the fourth *Zenso* (1987) endorsed the ‘internationalization’ of Tokyo at the same that it supported the development of large-scale resorts in rural areas (Yamazaki 1998). Again, overall growth is prioritized, and the mitigation of regional disparities was to be achieved by the ‘mini-growth’ of peripheral areas.

Political struggles over the developmentalist regime (1990s)

The demise of the bubble economic boom marked the beginning of the full-scale political struggle over the post-developmental regime. As Watanabe (2007) notes, it is essential to remember that in Japan neoliberal reforms were layered on (and not replacing) a developmentalist regime and that they started as electoral, rather than economic, reforms. As an illustration, unlike in the United Kingdom and the United States where the symbolic targets of neoliberal reforms in the 1980s were strong labor movements (e.g., the National Union of Mineworkers in the UK, and the Professional Air Traffic Controllers Organization in the US), the main target of Japanese neoliberal reform was the LDP-style money politics (Watanabe 2007, p. 307). In other words, the LDP, which controlled the Japanese government and the developmentalist regime during much of the postwar Japan, became the main subject of reform on its own.

The crumbling of the LDP came quickly. The Recruit Scandal, an insider trading scandal involving prominent LDP and other politicians, led to the resignation of the Takeshita Cabinet in June, 1989. In July, the LDP was defeated in the Upper House election for the first time since 1955. The factional strife within the LDP continued to dismay the voters through the terminal phase of the bubble economic boom. Finally, the burst of the bubble in 1991 “brought to light a train of scandals: capital loss compensation, forged certificates of deposit, lax financing, and a case involving bribery by the Tokyo Sagawa Express Delivery Company” (Oizumi 2004, p. 210). In 1993, the LDP lost its majority in the Lower House election and lost control of the government. The alliance of eight parties formed a jointly-controlled government, headed by Prime Minister Hosokawa from Japan New Party, one of the newly established political parties during this period (although the LDP, allied with two other parties, came back to the cabinet in 1994).

The alleged intent of a major electoral reform in 1994 was to reduce the influence of money politics and associated corruptions, and it had an unintended consequence of undermining the developmentalist regime (Watanabe 2007). The single-seat and proportional representation system (a combination of the single member district (SMD) system and the proportional representation (PR) system) were introduced in place of the medium-size multimember district system, which had long been criticized as a seedbed for clientelistic and faction politics, a political driver of developmentalist redistribution, in the Lower House election (Han 2010; Pempel 1997). In the medium-size multimember district system, two or more LDP candidates along with other party candidates may compete for seats. In this situation, there was strong incentives among the candidates from the same party (LDP, for example) to win local votes by making more attractive promises, such as construction projects. The newly-introduced single-seat system necessitated candidates to win approval from his/her party leadership first, making it easier for the party administration to monitor and control its members (Watanabe 2007).

The crumbling of the developmentalist redistribution did not come about easily, however. In 1997 the Hashimoto administration proposed a set of six ambitious reforms, one of which included the restructuring of the fiscal system. Yet, after Hashimoto resigned for the biggest loss of the LDP in the Upper House election in 1998, the following two Prime Ministers (Obuchi and Mori, 1998-2000), in their effort to regain the LDP's election bases (especially, farmers and small business owners), directed a large amount of public investment to rural regions, a tentative return of developmentalist redistribution.¹⁸ This political tactic did not work well for the LDP. According to Saito (2010), this is partly due to the very nature of fixed capital such as roads and dams, which, once built, last for a long time and further investment has diminishing political returns. This, Saito argues, is the internal contradictions of the LDP-style redistribution. In the mean time, government debt accumulated and domestic consumption remained sluggish, cultivating the public sentiment to allow for more radical reforms.

Emergent post-developmental regime? (2000s)

18. The official objectives of such public investments were to stimulate domestic demand and regional economies. Ironically, explicit spatial Keynesian rhetoric (finally) emerged in Japan during this period.

The rise of regional inequality during the early 2000s must be understood in the context of fledging post-developmental regime (cf. Brenner et al. 2010). Prime Minister Koizumi (2001-2005) accelerated the full-fledged neoliberal reform that had been under way prior to his administration (Watanabe 2007). Over this period, the Japanese economy experienced a prolonged (but marginal) growth (Feb. 2002 to Feb. 2006). At least three characteristics are worth-noting about this round of regional inequality transition.

First, the nature of Koizumi neoliberal reform mirrors the perceived ‘problems’ of the developmentalist regime. In other words, it has taken the form of rolling-back developmentalist redistribution policies, which are often spatial or quasi-spatial policies, as opposed to that of rolling-back welfare-state redistribution policies (e.g., social security). Thus, for example, the relative share of public infrastructure investment in the national budget, which has been declining since the early 1990s, reached all-time low in 2008 (Fig. 6). “The great Heisei mergers” (Heisei refers to the current emperor’s era), a striking example of scalar politics, which reduced the number of municipalities from 3,232 in 1999 to 1,820 in 2006, were motivated by a large cut in the local allocation tax grants from the national government.¹⁹ The Act on Special Districts for Structural Reform (2003), which offered various legal exceptions to particular local governments that propose innovative development schemes, in some ways reflects the resignation of the national government to actively lead regional economic development, and a permissive attitude for ‘natural’ winners (i.e., enlarging regional disparities).

Second, it is evident that the level of regional inequality since the early 2000s is not particularly high compared to that of the preceding periods (Fig. 1), and this fact is used by some commentators to justify funneling resources into a few metropolitan areas, especially Tokyo.²⁰ However, there have been suggestions about growing spatial inequality at sub-

19. The merger has produced a large volume of scholarly literature. One of the main economic rationales for such mergers is the local fiscal efficiency gain by scale economies (Takemoto et al. 2004). In contrast to such economic arguments, other observers point out various ‘side-effects.’ For example, mergers have create many “invisible villages” (Odagiri 2009): small towns and villages that were merged with large cities. Information of these previously-independent municipalities has become less visible, resulting in the risk of being removed from various policy targets.

20. The deregulation of various policies to control the location of industries is advocated to facilitate the return of manufacturing industries to metropolitan areas, such as Osaka (Masuda 2006). A more forceful support

prefectural scales, such as among municipalities, and between the prefectural capital city and the rest (e.g., Ito 2007; Kato 2007; Machimura 2009). This goes with some suggestions about the rise of regional metropolitan areas (as opposed to just the unipolar concentration to Tokyo). This “downscaling” of regional inequality can be confirmed by the scale variance analysis (Fig. 9), which indicates an rise in the relative significance of the municipal scale over that of the prefectural scale between the two episodes of regional divergence in the early 1990s and 2000s.²¹

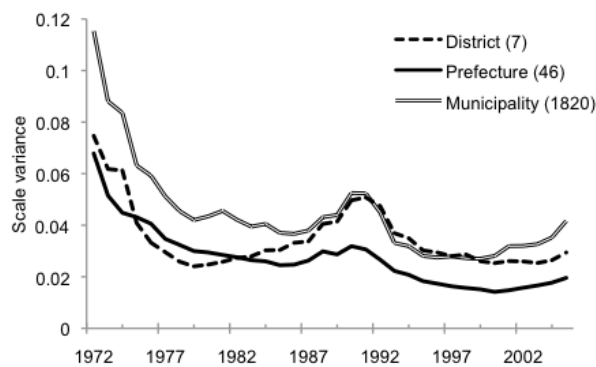


Fig. 9: Scale variance based on per capita income at district (regional block), prefecture, and municipality scales

for a further concentration of people and resources to selected urban areas, as a national growth strategy, is seen in Oguro and Ishida (2010). Others, while not advocating for (re)concentration of resources into a few metropolitan areas, are nevertheless fraying, such as Onishi (2005), a prominent urban planning scholar as well as policy advisor, ponders, “numerical inequality indices such as per capita income are useful in grasping policies and their progress, and are necessary in checking whether significant disparities may re-emerge in the future. However, they are no longer appropriate policy objectives” (p. 49).

21. We must also think about the relationship between spatial and non-spatial inequality. The demise of developmentalist redistribution may mean less income transfer to peripheral regions, increasing regional inequality, but it may also take the form of shifting the arena of inequality from spatial to non-spatial dimensions. For example, the spatial wage gap between urban corporate office workers and its rural branch plant workers may be increasingly replaced by the non-spatial wage gap (e.g., between permanent and contingent workers) regardless of their locations. Yugami (2010), for example, suggests that urban-rural differences in wage structures narrowed during the 1990s, resulting in the convergence of regional wage inequality. Another issue is non-income inequality. In the recent years, there have been many attempts to measure different, often more qualitative, aspects of life, such as ‘Quality of life’ kind of index and ‘happiness,’ and their regional differences (e.g., Yamane et al. 2008). Although the outcomes of these studies are not always revealing, uncritical focus on income is rightly being challenged today.

Source: Kojin Shotoku Shihyo (various years)

Notes: Numbers in parentheses indicate the count of 'regions' at each scale. Okinawa is excluded from the analysis. Note that the income data for this chart is based on individual taxable income, and does not include corporate income (which is included in the prefectural income data in the analyses above). See Yamamoto (2008) for mathematical procedures of scale variance.

Third, the turnaround of the national economy (2002-2006), and the accompanying rise in regional income inequality during this period further highlight the problem of equating regional inequality trends to the structural shift in leading industries (Fujita et al. 2004).²² This temporary divergence was strongly influenced by the good performance of some export-oriented manufacturing regions. In 2005, Aichi and Shizuoka were ranked as the second and third highest per capita income prefectures (Table 1). Osaka slips off from the list (cf. Masuda 2006). Both Aichi and Shizuoka host significant agglomerations of auto and other high-end manufacturing industries. Given that the stagnating domestic demand for auto (and other durable goods), the performance of these industries were driven primarily by foreign demand, although also favored by financial deregulation and low-interest rate policies.²³ In the existing regional inequality study, such as Yazawa (1999), the periodic rise of regional inequality is assumed, perhaps implicitly, to reflect the emergence of 'new' leading industries, favored by agglomeration economies. The auto industry, although undoubtedly technologically highly sophisticated, is not a 'new' leading industry by any means. Rather, its importance was somewhat passively determined by global demand conditions. Indeed, as Yada (1996) comments, it seems increasingly difficult to identify what may constitute future leading industries, which further undermines the basis of developmentalist regime.

22. This also implies the growing problem of the causal logic of "emergent leading industries => regional income differentials => rural to urban migration" in Fujita et al. (2004) and Tabuchi (1988).

23. Note that such demand in the U.S. was in part enabled by asset effects from the subprime loan bubble. A full analysis of the relationship between global financialization and domestic regional inequality would require another paper.

Table 1: Top and bottom five prefecture based on the relative per capita income levels (average = 1.0), various years.

	1961	1978	1990	2005
Top 5	Tokyo (1.88)	Tokyo (1.51)	Tokyo (1.69)	Tokyo (1.68)
	Osaka (1.59)	Osaka (1.28)	Aichi (1.33)	Aichi (1.28)
	Aichi (1.42)	Aichi (1.23)	Osaka (1.27)	Shizuoka (1.22)
	Kanagawa (1.41)	Kanagawa (1.19)	Kanagawa (1.22)	Kanagawa (1.18)
	Hyogo (1.33)	Hiroshima (1.16)	Chiba (1.19)	Shiga (1.17)
Bottom 5	Nagasaki (0.73)	Aomori (0.84)	Nagasaki (0.78)	Aomori (0.81)
	Kumamoto (0.72)	Nagasaki (0.83)	Kagoshima (0.78)	Miyazaki (0.79)
	Miyazaki (0.7)	Shimane (0.81)	Kochi (0.78)	Nagasaki (0.78)
	Iwate (0.7)	Kagoshima (0.81)	Miyazaki (0.76)	Kochi (0.77)
	Kagoshima (0.65)	Okinawa (0.78)	Okinawa (0.75)	Okinawa (0.74)

Source: Same as for Fig. 1

Conclusions

By examining the historical evolution of regional inequality in postwar Japan from a geographical political economy perspective, this paper aimed to highlight problems in the inverse-U hypothesis and its contemporary variants, which continue to inform policy prescriptions for economic development. As a critical assumption, I adopted the concept of developmentalism. What the Japanese experience shows is that when economic growth is prioritized in the framework of developmentalism, growth policies (including infrastructure development) became politically feasible only when accompanied by redistribution policies, and these policies, even if they are not intentionally spatial, had spatially differentiated effects. This is not exactly the prediction of the inverse-U theory, which assumes growth policy first and redistribution theory later, nor is it policy prescriptions of the dominant policy discussion, which generally support for spatially neutral redistribution. Furthermore, the Japanese postwar experience shows that these developmentalist policies have strong institutional inertia, and changes in these policies are fought over by different alignments of agents.

Some of the contemporary extensions of the inverse-U theory, which predict the ‘great-U turn’ in different ways, often overlook the fact that these factors are imposed on the existing, place-specific and path-dependent regime. New leading industries and globalization, however it is defined, can surely increase regional inequality in theory, and they often invoke

‘ahistorical’ policy response (‘nothing can and should be done about the spatial concentration of new leading industries’ or ‘protective measurements must be taken against cheap imports’). The Japanese case study shows, however, more realistic policy and political response cannot be possibly predicted without understanding the nature of actually existing regime. In the same way, neoliberalism may be surely the direction to which Japan is heading, but it is taking a form of, not the rolling-back of a welfare state, but more that of a developmentalist state.

The experience of postwar Japan over the past half century testifies a dilemma of a developmentalist regime. Surely the state should invest in spatially integrating infrastructure to catalyze urban agglomeration economies, while avoiding place-based policy interventions as much as possible, as the WB Report asserts. However, it is a fair question to ask whether the establishment of spatially integrating infrastructure (e.g., roads and railways) and spatially fixed, productive capitals (e.g., dams and nuclear plants), which supported rapid urban economic growth in postwar Japan, would have been possible, politically, without developmentalist redistribution. Furthermore, we should be mindful of the risk of developmentalist regime, besides the usual argument of ‘market distortion,’ on the long-term viability of peripheral regions. That is, although regional disparities should continue to be monitored, most empirically-minded observers of Japanese rural peripheries would tell that the challenges that these places face cannot be reduced to low income levels; rather, deeper contemporary challenges lie in the “hollowing out of pride/spirit” (Odagiri 2006), weakening of communal support systems, and the sense of psychological dependency (on governments and bureaucrats) (Matsumura 2007). It is beyond the scope of this paper to elaborate on the contemporary challenges that Japanese rural peripheries face, but a careful examination of these challenges, their causes and how the Japanese are tackling with them would provide valuable lessons for other countries.

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