DUISBURGER ARBEITSPAPIERE OSTASIENWISSENSCHAFTEN
DUISBURG WORKING PAPERS ON EAST ASIAN STUDIES

No. 78 2008

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How are Markets Created? The Case of Japan's Silver Market

IN-EAST 東亞
Institute of East Asian Studies

UNIVERSITÄT DUISBURG ESSEN

Title:

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Series:
Duisburg Working Papers on East Asian Studies / Duisburger Arbeitspapiere Ostasienwissenschaften
No. 78/2008
Printed version: ISSN 1865-8571
Internet version: ISSN 1865-858X

Abstract:
The paper discusses the conditions under which new markets are created, and tries to identify them by an empirical case study of Japan's silver market. It starts from the perspective that the source of competitive advantage under fundamental uncertainty lies in the integration of objective and subjective opportunities that derive from economic, socio-political, and cognitive conditions. The authors argue that the promise of the eventual size of the silver market is insufficient as an explanation for market creation because of the uncertainties involved.
Moreover, cultural traditions are much more varied than stereotypes may suggest and explain rather little. The supply and diffusion of information by various state organs, business associations and firms is conspicuous. The role of the state is a helpful one, though "hard" regulation is less important than elsewhere. The emerging market can profit from well-established core competences like manufacturing expertise and from the contribution of well-established, large enterprises and wide inter-firm networks. The authors conclude that Japanese firms do not have an inbuilt inability to create novelty as is sometimes suggested, particularly in cases where established enterprises can utilise their peculiar resource endowment. The plasticity of available institutions and technologies should not be underestimated, and a helpful mechanism to overcome cognitive path dependencies is soft regulation.

Keywords:
Market, creation, silver market, ageing, Japan

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ISSN 1865-8571 (Printed version)
ISSN 1865-858X (Internet version)

November 2008

Content

1 Introduction[1]

This paper is about the creation of markets. More specifically, it focuses on the conditions under which markets are created, and tries to identify them by an empirical case of Japan's silver market. We are interested in the complex process of market creation, which goes beyond the simple assumption that markets just "emerge". Given the central role of markets in economics, it is surprising that there is not too much discussion on the creation of markets, and even less empirical research.

In its theoretical part, this paper lines up (but not restricts itself) with a recent special issue of Small Business Economics (2007) and especially with a paper by Companys and McMullen (2007) that focuses on entrepreneurial opportunities. With Companys and McMullen (2007), we start from the perspective that the source of competitive advantage under fundamental uncertainty lies in the integration of objective and subjective opportunities that derive from economic, socio-political, and cognitive factors. This approach accepts a fundamental premise in economics, namely that economic data such as demand and prices influence market creation (Fontana and Guerzoni 2007). It also agrees that information asymmetries may become a barrier towards market creation. Yet, unlike the economic approach (at least the orthodox economic approach), it posits that market creation is, needless to say, influenced by economic, but also fundamentally influenced by political and cognitive factors.

Empirical research on market creation is sparse. Dimera et al. (2003) have documented factors that favour the creation of niche markets in the case of organic food. They come to the conclusion that education and previous experience are decisive for entrepreneurial action. Focusing only on socioeconomic factors, however, would provide a biased understanding of market creation. Also, research in different geographical settings as compared to the usual frame of geographical reference of U.S. and Western Europe has been asked for (Companys and McMullen 2007). Hence we react to recent developments in the literature that it is important to approach the issue of market creation in a more open framework, taking the uncertainties of future business opportunities seriously, and to carry out research in a different geographical setting. These are issues we intend to tackle in this paper.

Japan's silver market, the empirical focus in this paper, is an interesting case, as it seems to stand for an early and dauntless advance into a new field of business, whose analysis can hopefully teach us a lot about how to successfully create new business opportunities. The important role of the silver market for a high-income, mature, populous and ageing economy like Japan has often been recognized (io new management 2005, UD e.V./TMU 2008). However, it should be noted that it is far less clear what this implies for specific, possibly novel products of individual enterprises. For instance, which products will be sought after by consumers? Need does not necessarily equal market demand, as a consultant recently put it (Lippert 2008). Will household robots ever be a success or will seniors remain skeptical? What will competition be like? Will an individual firm, on the basis of its presumed strengths and weaknesses, be able to profit from the market, given intense competition from home and abroad? Despite the hype about the silver market, it thus remains clouded in uncertainty, and it is an open question how enterprises approach these constitutive ambiguities.

Japan is the second anchor for our empirical analysis. To focus the analysis, it will be helpful to make use of meaningful generalizations about how Japanese entrepreneurship works. An established procedure is to concentrate on those factors which have been identified in the literature on the "J-model" as being specific to Japanese firms. When we use the term "J-model" we refer to the varieties of capitalism approach (Casper 2003; Casper and Whitely 2002; Casper, Lehrer, Soskice 1999; Hall and Soskice 2001) with its classification of Japan as belonging to the coordinated type of market economies, and to Aoki's seminal work on the J-firm, in which he identifies a specific corporate model, embedded in a specific institutional setting (recent contributions in Aoki et al. 2007). The former relates to hypothesis 2, which analyses the role of associations and deliberating councils (*shingikai*) in information sharing, and to hypothesis 3, which focuses on their role in the policy-making process. The latter relates in hypothesis

1 Contents of this paper were presented to the International Conference "Demographic Change in Japan and the EU – Comparative Perspectives" of the German Association for Social Science Research on Japan (VSJF) in Kaiserswerth, 30 November 2008, held in cooperation with the Heinrich Heine University of Düsseldorf.

4 to internal patterns of knowledge sharing and integration; a stream of literature which has developed Aoki's idea of horizontal co-ordination with relation to innovation management. Moreover, we explicitly add an element to the J-model which is mostly only implicitly mentioned, and refers to specific informal institutions (hypothesis 1). We refer to these four core elements when we use the concept of the "J-model" as a frame of reference, being aware that the more recent literature has recognized that the archetypical J-firm has given way to more hybrid forms of corporate governance, finance and labor relations (Aoki 2008; Aoki et al. (eds.) 2008). However, even most of the new types rely on information processing and sharing strengths identified in the J-firm literature and the so-called Hitotsubashi school (Aoki 2008; Takeuchi and Nonaka (eds.) 2004) so that we resort to these findings and use them as a frame of reference.

The reminder of the paper is structured as follows: After the introduction (1), we shortly sketch the Japanese silver market (2). In the third part, we identify factors that are central for market creation and formulate hypotheses about the conditions that favoured the creation of Japan's silver market (3). In the fourth part, we discuss empirical evidence for our hypotheses (4). The paper ends with a conclusion (5).

2 The New Silver Market and Japan as an Early Mover

Schumpeter (1934) has identified five types of combinations as new and innovative: New products, new production methods, new forms of organizations, new sources of supply, and new markets. The creation of new markets is an important innovative act that, on a whole, increases public welfare, because consumers recognize that they will be better of. "New" in our understanding includes "every novel element of an activity" (Plummer et al 2007: 366), so that we classify also those markets as new which may not be new objectively (Hausschild 1993). The concept of new markets embraces smaller changes as well as distinctively novel changes (Becker et al. 2006), so that products in new markets include low-end as well as new-market disruptive innovations (Christensen 1997). Actors thus act under considerable uncertainty (even if the degree of uncertainty depends on the degree of novelty).

The silver market, in this sense, is a distinctly new and innovative market: It was not recognized as a market until recently. Japan is widely reputed to be a frontrunner in this market; other leading OECD countries second-movers (io new management 2005, UD e.V./TMU 2008: 73). While the market itself is definitely new, products offered in this market include new, disruptive innovations such as new humanoid robotics as well as low-end innovations such as new cosmetic lines.

As may be typical of a newly emerging market, the silver market cannot easily be demarcated. It refers to the consumption of goods and services by elderly people, sometimes referred to as the 50+ generation, sometimes only encompassing those of 65+. It does not refer to total consumption, as some goods and services will be equal for all generations. The silver market is about new goods and services that take particular note of the needs and interests of the older generation. Besides specialised products, silver products and services are also related to universal design (UD) and barrier-free products and services. UD refers to broad-spectrum solutions that are also accessible to those with special needs, like old, frail or handicapped people, but whose added value is not limited to such special interest groups. Barrier-free refers modifications especially for those who are handicapped or disabled. As all three markets are so closely linked, we will refer to aspects of all of them in this paper, to the extent that they are relevant for the silver market proper. It thus is difficult to give exact numbers, or even to draw international comparisons. We thus rely on the estimation of experts and their evaluation that Japan is a leading market (io new management 2005, UD e.V./TMU 2008), taking its leading position and early market creation as given. The market volume is estimated to expand from presently 39 billion Yen (approx. 39 million US$) to 112–155 billion Yen (approx. 111–154 million US$) in 2025 (SKS 2000). Most leading firms – as Toyota, Mitsui, Sony, Matsushita, Hitachi – are active in this market, and have mainly diversified into this sector. Thus, this is quite a different approach from the typical U.S. model of creating new industries (e.g. biotech) by small start ups (Rao and Singh 2001). The market growth for the silver market is estimated to be 4–5% (excluding care and welfare; METI 2005; SKS 2000). Sectors with the highest growth perspectives are leisure, food and education (SKS 2000).

As is well known, the ageing and even decline of the population is of particular concern for Japan. Both the high life-expectancy and the low fertility contribute to the graying of Japan. While other countries experience aging-related issues as well, at least among the mature developed economies Japan is set to experience the most dramatic change (compare for data and their evaluation Kono 2008, Jones Finer 2000). It may thus seem at first sight that it is natural that Japan has recognized the silver market and developed its potential early. However, the developments are more complex.

First, up to 1995, Japan was still a quite "young country", where the aged dependency ratio was low. According to the United Nations (2000), the percentage of people over age 65 of total population in Japan was in 1985 only 10.3 % (compared to the UK with 15.1 % or Germany with 14.5 %) and in 1995 only 14.6 % (compared to the UK with 15.9 % or Germany with 15.0 %). Only in 2000, Japan became more over-aged than other OECD countries (Japan: 17.1 % vs. Germany: 16.4 % and UK: 16.0 %).

Second, Japan has thematized the issues of ageing much earlier and more forcefully than other countries. For instance, yearly White Books on the ageing society have been published by the Japanese government since 1996 (see the overview at http://www8.cao.go.jp/kourei/whitepaper/index-w.html), while the German government has commissioned and published only one major report in 2007. Apart, the scope and depth of the information is also remarkable. Reports and studies contain detailed market forecasts, for instance. This includes information on ageing and income levels, international comparisons, forecasts for different subsectors as well as case studies of successful product and service development (METI 2004).

Third, it is far from self-evident that engaging in the silver market can turn into a profitable business. A decision towards the production of silver products is therefore a courageous strategic decision and deserves closer scrutiny. While consumption expenses of those 60+ since the mid 1980s have indeed significantly more increased than of those aged 35 to 39 and while the elderly in Japan are famous – also on an international scale – for their accumulated financial and real estate holding, it is expected that old age poverty will be a major issue in forthcoming years (Kohlbacher and Herstatt 2008). Moreover, it is an open question whether the older population can be motivated to buy enough silver products at prices that recover the necessary development costs (Lippert 2008). For instance, while barrier-free motorcars would seem an obvious candidate for successful products, and while barrier-free cars have been consistently featured highly in recent Tokyo Motor shows, in the half year from April to September 2002 less than 17,000 of them were sold (Web-Japan 2002).

We conclude that it is an open and challenging question to understand the dynamics of Japan's silver market better.

3 Creation of New Markets: The Role of Cognitive, Economic and Sociopolitical Factors

Companys and McMullen (2007) have proposed to categorize the approaches on the creation of markets into three, namely into economic, cognitive, and sociopolitical approaches, and we hope to show in this paper that the factors will have to be seen in conjunction. We will shortly sketch these approaches and formulate working hypotheses related to our empirical case.

The most fundamental approach is offered by the cognitive school, as it sees the subjective perception of the world as the basis for venturing into newly realised opportunities. It tends to stress that new markets do not only come into being because of the availability of new data, but also because of the subjective interpretation of data, following the respective internal order of the mind. Thus, by different perceptions of the external world, two decision tasks may lead to different results – "context matters", as Smith (2003: 486) has put it. Search and selection processes take only place in limited domains; given the path dependency of beliefs, it can also be assumed that the perception of a certain domain cannot be changed deliberately (compare also Witt 2000). Markets are constructed and embedded in social, institutional and cultural structures that reduce the uncertainty of actors on the one hand (Granovetter 1985; DiMaggio and Powell 1991) and define "what is feasible, what is appropriate" (Nelson 2007: 7) on the

other. In the early stages of market creation, given beliefs may make actors more (or less) receptive towards opportunities.

On the background of J-type firm organization and the role of knowledge creation and sharing, it can be conjectured that certain mentalities (Peng and Akutsu 2001) usually associated with Japan, including uncertainty avoidance and long-term orientation, influence market creation significantly.

In the specific case of the silver market, it may in addition be expected that given beliefs in Japan related to an ageing population make firms more (or less) receptive towards the attractiveness of silver products. Further, we cannot exclude that the cognitive filters employed by actors undergo a dynamic change, either through real-world factors influencing and shaping cognition or through some deliberate manipulation (whether fully successful or not). For the time being, we formulate our hypothesis in a simple way:

Hypothesis 1: (General) Cultural beliefs make actors more receptive for new opportunities.
(Specific) Aspects of what is considered Japanese mentality (uncertainty avoidance, long-term orientation) significantly frame the affinity towards market creation. Related to the specific market in Japan under investigation, an image of older people as attractive customers (instead of being a burden for the welfare system) has been an important condition for market creation.

Further, in a conventional economic perspective, markets have been understood as a mechanism of price formation. Market creation is thus not seen as a "problem", since it is assumed that markets will be created in every situation when entrepreneurs have an incentive to acquire temporary monopoly rents. In his seminal article, Arrow (1974) formulated concisely that "when a market could be created it would be". Going a step further, Arrow argues that the de facto given entrepreneurial opportunities result also out of differences in the distribution of information, so that they are dependent on the degree of information asymmetries (comp. Arrow 1962). In this understanding, "new data about material resources is the source of entrepreneurial opportunity" (Companys and McMullen 2007: 305) and the relative competitive advantage of a firm in creating a market results out of the discovery and exploitation of the relevant information stock. This information stock includes quite heterogeneous information, such as the expected volume of the market, the quality of demand, the need and existence of technical competences, information about consumers' willingness to pay, and also the required institutional set-up. Institutions and organizations that reduce information asymmetries may thus contribute to market creation, since search costs are lowered.

However, it can be observed that even if information is provided, firms do not take notice of new information. This point is not explicitly taken up by Company and McMullen (2007), but is central for our understanding of opportunities: The literature is full of examples of organisations that were unable to transform themselves despite the best intentions of the management (Tushman and Anderson 1997; Tushman and O'Reilly 1997). Relevant information was, obviously, not translated into the decision to explore new markets. The reason is attributed to the path dependent information processing of human beings, which may lock become locked in into established patterns of perception (Cho and Hambrick 2006; Müller-Stewens and Lechner 205). The upcoming of ICT technologies does not solve this problem since they increase the total volume of information, inducing a "cognitive overload" (Kasper/Streit 998: 118). To conclude: Information is not necessarily translated into knowledge.

This leads to the question which conditions have to be fulfilled so that information, e.g. the aging of population, can enter the firm easily and can trigger an "attentional change" (Cho and Hambrick 2006), stimulating new business opportunities (Myer and Marquis 1969; Herstatt and von Hippel 1992). With Picot and Scheuble (1997) we identify three conditions: get-at-ability, centrality and credibility.

- *Get-at-ability* means that information should be easily accessible and search costs should be low (e.g. locally, intellectually).
- *Centrality* refers to the fact that the delivered information should be central for the accomplishment of the firms' tasks (e.g. relevance of information).
- *Credibility* applies to confidence in the source of information which should be high (e.g. long-established contacts).

It can be expected that firms which are working in an environment that supplies get-at-able, central and credible information may be less blind towards new opportunities. This leads to the second hypothesis:

Hypothesis 2: (General) The reduction of information asymmetries is favorable for the creation of markets. Get-at-able, central and credible information allow an attentional change.
(Specific) For Japan's silver market, there have been appropriate mechanisms for easing access to relevant information in terms of get-at-ability, centrality and credibility given the existence of influential coordinating institutions.

Related to this is the role of power in market creation (compare basically Olson and Kähkönen 2000; Hollingsworth 2002). Economic actors will seek to influence markets and governments by their strategic action in favor of institutions that best fit their interest. Through its regulatory powers, the state may thus act to create and shape a market in addition to whatever firms may be striving for – or may neglect. Examples include regulatory capture, the setting of standards or the definition of product quality. In their seminal analysis on the competitiveness of nations, Porter et al (2000) have argued that an early formulation of demanding national quality, safety and other requirements may enhance the sophistication of local demand by pushing companies to develop higher value products. Markets are thus also "a function of firm policies" (Samuels 2004).

These observations lead us to our third hypothesis:

Hypothesis 3: (General) Regulation and standards-setting by politics are an important venue for market creation. It lies in the firms' strategic interest to influence these processes.
(Specific) One condition for the early creation of Japan's silver market has been an early formulation of national regulation and quality standards.

Finally, the firm is not simply a receiver of externally provided or available information, but shapes the accessibility of information through its inter-firm and intra-firm set-up. As for inter-firm aspects, Picot/Scheuble (1997) have specified nearness as another condition for attentional change. Nearness refers to the fact that conflicts with cooperation partners should be low. Recent innovation literature supports this argument in arguing that actors' strategies are influenced by the respective (interfirm, innovation, financial, sociopolitical, sectoral) system in which they act (Breschi and Malerba 1997; Edquist 1997; Malerba 2006; Lundval et al. 2002). While earlier contributions have often suggested that these systems are "determining" or limiting actors' choices – in the sense of path dependency –, there seems to be more leeway when one considers that sectors consist of numerous subsectors and corporate models, so that different institutional settings may be "fitting", as the "related varieties" approach argues (Casper 2003; Casper and Whitely 2002; Casper, Lehrer, Soskice 1999), and that institutional settings have plastic properties, allowing for gradual transformation (Storz 2008). Stressing the role of the inter-firm environment is well in line with a large strand of the comparative advantage literature: According to Porter's famous diamond of emerging industrial clusters (1990), supporting industries and available resources are important side conditions – apart from the role of effective demand. The lead market-hypothesis also stresses that apart from demand, the industrial "neighbourhood" is an important asset to develop lead advantages in an emerging industry (Beise 2004).

On the intra-firm level, organization theory and strategic management have intensively debated under what conditions an organization is able to realize innovative capacities and embrace novel opportunities. Characteristics of the top management team (TMT) are considered important by upper echelon theory (Camelo-Ordaz et al. 2005), as the cognitive base of corporate leaders is considered to strongly influence their decisions. One important factor is the demographics of TMTs (Wirsema and Bantel 1992), including their cultural background (Schneider and de Meyer 1991), and another is the degree of diversity within such teams (Kilduff et al. 2000). In the Japanese context, specific mechanisms for knowledge sharing that spread, apply and create further tacit knowledge within the firm have been found to be important (Nonaka and Takeuchi 1995; Takeuchi and Shibata 2006). For simplicity, we combine these arguments as follows:

Hypothesis 4: (General) Inter-firm and intra-firm resources and organizational features are important in helping companies to recognize and embrace novel business opportunities.

(Specific) In the Japanese context of an emerging silver market, the industrial "environment" of networking companies has been important, including resources contained in the core competences of firms, and overall knowledge sharing-friendly structure of firms.

In part 4, we will discuss these hypotheses by using empirical evidence of the Japanese silver market.

4 The Japanese Case

In the following, we will discuss the empirical evidence for the specific application on Japan for the four hypotheses we have formulated above.

Hypothesis 1: (General) Cultural beliefs make actors more receptive for new opportunities.
(Specific) Aspects of what is considered Japanese mentality (uncertainty avoidance, long-term orientation) significantly frame the affinity towards market creation. Related to the specific market in Japan under investigation, an image of older people as attractive customers (instead of being a burden for the welfare system) has been an important condition for market creation.

If an abstract market potential cannot satisfactorily explain the dynamics of a strongly emerging silver market in Japan, another explanation could be culturalist (Hypothesis 1), namely a Japanese inclination of revering old people and showing filial piety, based on Confucian traditions. The dominant seniority principle in firms, the high share of older entrepreneurs or the tradition in arts and handicraft with outstanding teachers (*sensei*) also may evoke the impression of a culture that has a positive connotation of age (Formanek 2008). However, it is not obvious whether such a tradition really distinguishes Japan from the West, which has its own Judaeo-Christian heritage, including the Fifth Commandment: "Honour thy Father and thy Mother" (Jones Finer 2000: 29). Moreover, it is far from obvious how filial piety, which is about relationships between specific individuals, would influence abstract market relationships, i.e. decisions of entrepreneurs or corporate managers in favour of an anonymous multitude of aged people. And also, behaviour such as taking care of one's parents, for instance, could be "strategic": the child looks after the parent in order to eventually enjoy the fruits of a sizeable bequest that is still cunningly held back by the senior (Tachibanaki 1994). Indeed, qualitative analysis of images of old age in Japanese literature, folklore and current media show that the views on old age are quite ambivalent (Formanek 2008, Gebhardt 2008), this is proven also by international surveys, according to which Japanese agreed more often than Westerners with a stereotype that elderly people are "grouchy" or "selfish" (Koyano 1997: 215–217).[2]

Independent from the peculiar environment of ageing and silver industry one could relate a peculiar national culture like Japan's to its willingness to overcome the status quo and embrace the quest for novel markets. Taking Hofstede's scheme as the most frequently used, if not uncontroversial approach, this would lead to the expectation that the high degree of uncertainty avoidance of Japanese citizens, who make up the clear majority within the TMTs of Japanese firms, will lead to a reduced inclination to treat virgin ground. However, comparative empirical research has shown that "contrary to expectations, uncertainty avoidance values appear to induce greater openness toward change" (Geletkanycz 1997: 627), and this puzzling surprise has also been noted for Japan in particular (Schneider and de Meyer 1991: 316). The reason could be that actors from an uncertainty-tolerant culture are more patient when following an earlier chosen strategy. Apart from high degrees of uncertainty avoidance, Japan scores high in the Hofstede framework in terms of masculinity and long-term orientation. While masculinity does not have a notable effect, a long-term perspective expectedly does have (Geletkanycz 1997), and this strengthens the openness of Japanese senior managers towards change.

Finally, if culture is understood in a more dynamic way, it becomes critical how information on old age, including its market potential, is generated, distributed and evaluated. This will be the emphasis of Hypothesis 2:

2 Further, the advanced age of typical Japanese board managers may even come as a blessing in disguise for the development of silver products, because they can be expected to view such goods that quite often may seem rather uncool with less antipathy than younger senior managers. Such expectations are hard to substantiate, however.

Hypothesis 2: (General) The reduction of information asymmetries is favorable for the creation of markets. Get-at-able, central and credible information allow an attentional change.
(Specific) For Japan's silver market, there have been appropriate mechanisms for easing access to relevant information in terms of get-at-ability, centrality and credibility through existing coordinating institutions.

A large amount of literature ascribes coordinating organizations that fulfill the function of information generation and distribution a central role in the political process in Japan. One stream stems from the literature on Japanese policy and Japanese business (Schaede 2000; Itami 1993; Lehmbruch 1995; Schwartz 1993), another from the varieties of capitalism approach (Hall and Soskice 2001; Amable 2003; Crouch 2005; Hollingsworth et al. 1994; Soskice 1999), including more dynamic versions (like Casper et al. 1999; Casper et al. 2002). There are two types of organizations to which a special role in information sharing is ascribed to in the literature: deliberating councils (*shingikai*) and business associations. Due to the long tradition and the perceived efficiency – the role of intermediaries as information sharing organization belongs to the core of coordinated economies – it can be assumed that there is a deeply anchored conviction that these intermediaries supply useful information. Both types of organizations, councils and business associations, can also be found in the silver market.

The members of the deliberating councils are mainly from business or business associations, research institutes and the media; members of the respective ministry or agency often participate as a "guest", although this may belittle their actual role. The Industrial Structure Council is one of the most influential councils in METI. Related to the silver market, some existing subsections (*bukai*) of the Council have enlarged their competences to the new business segment. Two quite active subsections are the *Shin Seichō Seisaku Bukai* (Section for New Growth Industries) and the *Sōgō Bukai* (General Section), some of them have additional sub-working groups (*iinkai*; e.g. *21seiki Keizai Sangyō Seisaku Kentō Shōiinkai*). Of the 22 members of the *Sōgō Bukai*, there are 10 leading firms (President Publishers, Recruit, Hitachi, Mitsubishi, Good Will Group, Matsushita, Nihon Keizai Shinbun, Mitsui, Sony and Toyota) and 7 mostly high-ranked universities (Tōkyō University, Hitotsubashi University etc); and basically the same structure holds for the *Shin Seichō Seisaku Bukai* with 10 leading firms, 6 high-ranked universities (given totally 19 members) (METI 2005; SKS 2000). Since existing structures are enlarged to new functions, it is not so much the case that new committees for the silver market are newly established, but that existing committees have taken up this subject, sometimes by organising specified subgroups. This approach can also be found in other organizational units such as the JISC (Japan Industrial Standards Committee; JISC 2003).[3]

The information that is generated and distributed in the deliberating councils is used for public documents of the METI. The report of the Industrial Structure Council (SKS 2000) influenced METI's strategy on the creation of new industries (METI 2005). Based on these reports, METI has identified the silver market as an important industry quite early: The accessibility of information processing equipment which is now a "hot topic" in international standardization has been already recognized by the Ministry in 1989, when it released the "Description of Accessibility Guidelines for Use of Computers by People with Disabilities and Elderly" (June 1990), which became the predecessor of the international ISO/IEC Guideline 71 (Iizuka 2004). Later, in its "Strategy for the Creation of New Industries" of 2004, METI (2005: 13–15) has identified seven future industries. One growth field contains the silver market (SKS 2000), giving Japan the opportunity to position itself in certain sectors as a lead market (METI 2004). Referring to the above mentioned criteria of get-at-ability, centrality and credibility, we conclude:

– *Get-at-ability*: The council's regular publications and the use of case studies should meet the criterion of get-at-ability.
– *Centrality*: Detailed information on the development of subsectors, whose investigation is based on the evaluation by leading firms, guarantees a certain centrality.

3 This does not exclude that new councils are formed (e.g. Kōreisha Shōgaisha Hairyō Seikatsuyōhin no Hyōjunka ni kansuru Chōsa Kenkyū Iinkai at JISC in 2001), but this seems to be more of an exception, JISC 2003.

– *Credibility*: Dense personal networks due to already existing structures should increase the credibility of information. Entrepreneurial uncertainty in the silver market should thus be reduced, and the expectation modeling process be influenced.

The creation of the Japanese silver market thus can definitely not be understood as a "bureaucracy-push" strategy, but it can be expected a cognitive framing of a positive perception of business opportunities in the silver market. This can be interpreted as a case of soft regulation.

Private business associations play an additional, even more crucial role. Since the silver market is a trans-sectoral market, the exact number of associations that are related to it is difficult to identify. In this paper, data of JISC (Japan Industrial Standards Committee) are used. In a recent survey on the needs for standardization for elderly and disabled persons, JISC (2003) has identified 200 associations for which the emergence of the silver market should be of special relevance. The demarcation of elderly and disabled persons is somewhat blurred, but we could eliminate those associations which are directly related to disabled persons. According to this data, there are totally 119 business associations (*gyōkai dantai*) including 13 research institutes and research associations, 15 consumer associations and 18 associations of elderly people. Focusing only on business associations, their high degree of specialization (expressed in the industrial focus and indirectly by the small number of regular members) and the in average long standing existence of the associations with an average age of 44 years contributes to information flows that meet the criteria of get-at-ability, centrality and credibility (Table 1). The classification by industry moreover indicates that especially associations in those sectors which possess relative comparative advantages – such as precision machinery or transportation – are identified as being especially relevant for policy formulation of the silver market (Table 2).

Table 1: Relevant business associations within the sphere of the Japanese silver market

Name (Japanese)	Name (Transcription)	Name (English)	Industrial Sector*	Founding Year	Total Members
IC カードシステム利用促進協議会	IC Kādo Shisutemu Riyō Sokushin Kyōgikai	Japan IC Card System Application Council (JICSAP)	46	1993	43
ISO/TC21 事務局	ISO/TC21 Jimukyoku	N/A	N/A	1979	37
社団法人　ビジネス機械・情報システム産業協会	Bijinesu Kikai – Jōhō Shisutemu Sangyō Kyōkai	Japan Business Machine and Information System Industries Association (JBMIA)	46	1960	59
圧力鍋連絡協議会	Atsuryokunabe Renraku Kyōgikai	N/A	44	N/A	N/A
印刷工業会	Insatsu Kōgyōkai	N/A	32	1952	103
インターホン工業会	Intâhon Kōgyōkai	Japan Interphone Industry Association	47	1966	39
社団法人　遠赤外線協会	Ensekigaisen Kyōkai	Japan Far Infrared Rays Association (JIRA)	46, 48	1990	53
鉛筆シャープナー工業会	Enpitsu Shāpunā Kōgyōkai	N/A	38	N/A	N/A
財団法人　家電製品協会	Kadenseihin Kyōkai	Association for Electric Home Appliances (AEHA)	44	1973	51
有限責任中間法人カメラ映像機器工業会	Kamera Eizō Kikō Gyōkai	Camera & Imaging Products Association (CIPA)	48	2002	59
キッチン・バス工業会	Kicchin – Basu Kōgyōkai	N/A	36	1985	70
社団法人　教科書協会	Kyōkasho Kyōkai	Textbook Publishers Association of Japan	32	1953	44
高圧ガス保安協会	Kōatsu Gasu Hoan Kyōkai	The High Pressure Gas Safety Institute of Japan (KHK)	44	1963	1360
抗菌製品技術協議会	Kōkin Seihin Gijutsu Kyōgikai	Society of Industrial Technology of Antimicrobial Articles	35	1998	56
社団法人　色材協会	Shokuzai Kyōkai	Japan Society of Colour Material (JSCM)	34	1927	2520
社団法人　自転車協会	Jitensha Kyōkai	Bicycle Association (Japan)	49	1948	273

Name (Japanese)	Name (Transcription)	Name (English)	Industrial Sector*	Founding Year	Total Members
財団法人　自転車産業振興協会	Jitensha Sangyō Shinkō Kyōkai	Japan Bicycle Promotion Institute	49	1964	N/A
社団法人　自動車技術会	Jidōsha Gijutsukai	Society of Automotive Engineers of Japan	49	1947	40919**
財団法人　住宅産業情報サービス	Jūtaku Sangyō Jōhō Sābisu	Housing Industry Information Services	52	1971	N/A
社団法人　情報サービス産業協会	Jōhō Sābisu Sangyō Kyōkai	Japan Information Technology Services Industry Association	84	1984	714
情報通信ネットワーク産業協会	Jōhō Tsūshin Nettowāku Sangyō Kyōkai	Communications and Information Network Association of Japan	75, 84	1948	291
社団法人　照明学会	Shōmei Gakkai	The Illuminating Engineering Institute of Japan	46	1916	5757**
社団法人　新交通管理システム協会	Shinkōtsū Kanri Shisutemu Kyōkai	Universal Traffic Management Society of Japan	87	1996	49
財団法人　新聞広告審査協会	Shinbun Kōkoku Shinsa Kyōkai	Newspaper Advertising Review Council, Japan	86	1971	84
ステンレス製魔法瓶協議会	Sutenresu-sei Mahōbin Kyōgikai	N/A	42	N/A	N/A
財団法人　生活用品振興センター	Seikatsu Yōhin Shinkō Sentā	N/A	86	1959	N/A
財団法人　製品安全協会	Seihin Anzen Kyōkai	Consumer Product Safety Association (CPSA)	86	1973	N/A
財団法人対日貿易投資交流促進協会	Tainichi Bōeki Kōryū Sokushin Kyōkai	Manufactured Imports and Investment Promotion Organization (MIPRO)	62	1978	N/A
社団法人　全国家具工業連合会	Zenkoku Kagu Kōgyō Rengōkai	Federation of Japan Furniture Manufactures Association	38	N/A	41
全国楽器協会	Zenkoku Gakki Kyōkai	N/A	38	N/A	N/A
全国鞄工業組合連合会	Zenkoku Kaban Kōgyō Kumiai Rengōkai	N/A	29	N/A	N/A
全国自動ドア協会	Zenkoku Jidō Doa Kyōkai	N/A	42	N/A	N/A
社団法人　全国道路標識・標示業協会	Zenkoku Dōrō Hyōshiki – Hyōji Gyō Kyōkai	Japan Contractors Association of Traffic Signs and Lane Markings	N/A	1976	458
全国魔法瓶工業組合	Zenkoku Mahōbin Kōgyō Kumiai	All Japan Vacuum Bottle Association	42	N/A	N/A
全日本紙製品工業組合	Zen-Nihon Kamiseihin Kōgyō Kumiai	N/A	32	N/A	N/A
全日本寝具寝装品協会	Zen-Nihon Shingu Shinsouhin Kyōkai	All Japan Bedding Goods Association	38	N/A	N/A
全日本履物団体協議会	Zen-Nihon Hakimono Dantai Kyōgikai	N/A	29	N/A	N/A
社団法人　電子情報技術産業協会	Denshi Jōhō Gijutsu Sangyō Kyōkai	Japan Electronics and Information Technology Industries Association (JEITA)	45, 46, 47, 48	N/A	528
トイレットペーパー JIS 普及会	Toiretto Pēpā JIS Fukyū-kai	N/A	32	N/A	N/A
東京化粧品工業会	Tōkyō Keshōhin Kōgyōkai	N/A	35	N/A	405
株式会社東京ビッグサイト	Kabushikigaisha Tōkyō Biggusaito	Tokyo Big Sight Inc.	87	1956	N/A
東京商工会議所	Tōkyō Shōkō Kaigisho	The Tokyo Chamber of Commerce and Industry	N/A	1878	81804
東京都立産業技術研究センター	Tōkyō Toritsu Sangyō Gijutsu Kenkyū Sentā	Tokyo Metropolitan Industrial Technology Research Center	N/A	1921	N/A

Name (Japanese)	Name (Transcription)	Name (English)	Industrial Sector*	Founding Year	Total Members
日本アパレル工業技術研究会	Nihon Apareru Kōgyō Gijutsu Kenkyūkai	Japan Apparel Technology and Research Association (JATRA)	28	1971	46
社団法人　日本イベント産業振興協会	Nihon Ibento Sangyō Shinkō Kyōkai	Japan Association for the Promotion of Creative Events (JACE)	N/A	1989	83
日本医療機器産業連合会	Nihon Iryōkiki Sangyō Rengōkai	The Japan Federation of Medical Devices Associations (JFMDA)	48	1984	152
日本医療福祉設備協会	Nihon Iryō Fukushi Setsubi Kyōkai	Healthcare Engineering Association of Japan (HEAJ)	48	1953	800
社団法人　日本印刷産業連合会	Nihon Insatsu Sangyō Rengōkai	Japan Federation of Printing Industries (JFPI)	32	1985	66
日本羽毛製品協同組合	Nihon Umō Seihin Kyōdō-kumiai		27	N/A	141
社団法人　日本エアゾール協会	Nihon Eazōru Kyōkai	Aerosol Industry Association of Japan	35	1954	51
日本衛生設備機器工業会	Nihon Eisei-setsubi Kiki Kōgyōkai	N/A	36	1948	7
日本絵具クレヨン工業協同組合	Nihon Enogu Kureyon Kōgyō Kyōdō-kumiai	N/A	38	N/A	N/A
財団法人　日本エルピーガス機器検査協会	Nihon Erupīgasu Kiki Kensa Kyōkai	Japan L.P. Gas Instrument Inspection Association (LIA)	43	1968	N/A
日本鉛筆工業協同組合	Nihon Enpitsu Kōgyō Kyōdō-kumiai	N/A	38	1912	37
社団法人　日本オフィス家具協会	Nihon Ofisu Kagu Kyōkaiōjin	Japan Office Institutional Furniture Association	38	N/A	99
日本カーペット工業組合	Nihon Kāpetto Kōgyō Kumiai	N/A	27	1946	88
社団法人　日本火災報知機工業会	Nihon Kasaihōchiki Kōgyōkai	N/A	46	1949	86
財団法人　日本ガス機器検査協会 (JIA)	Nihon Gasu Kiki Kensa Kyōkai	Japan Gas Appliances Inspection Association (JIA)	44	1967	N/A
日本ガス協会	Nihon Gasu Kyōkai	The Japan Gas Association	12	1947	211
社団法人　日本ガス石油機器工学会	Nihon Gasu Sekiyu Kiki Kōgakkai	N/A	12	N/A	N/A
日本ガラスびん協会	Nihon Garasu-bin Kyōkai	Japan Glass Bottle Association	37	1952	54
社団法人　日本玩具協会	Nihon Omocha Kyōkai	The Japan Toy Association	38	1967	247
日本義肢装具学会	Nihon Gishisōgu Gakkai	Japanese Society of Prosthetics and Orthotics (JSPO)	48	1968	N/A
社団法人　日本喫煙具協会	Nihon Kitsuen-gu Kyōkai	The Japan Smoking Articles Corporate Association	25	1976	63
日本靴工業会	Nihon Kutsu Kōgyōkai	N/A	29	N/A	N/A
日本靴下工業組合連合会	Nihon Kutsushita Kōgyō Kumiai Rengōkai		28	1947	18
日本靴連盟	Nihon Kutsu Renmei	N/A	29	N/A	N/A
日本化粧品工業連合会	Nihon Keshōhin Kōgyō Rengōkai	Japan Cosmetic Industry Association	35	1959	N/A
日本工具工業会	Nihon Kōgu Kōgyōkai	The Japan Small Cutting Tools' Association (JSCTA)	42	1948	36
社団法人　日本工作機械工業会	Nihon Kōsaku Kikai Kōgyōkai	Japan Machine Tool Builders' Association (JMTBA)	44	1951	94
日本香料工業会	Nihon Kōryō Kōgyōkai	Japan Flavor & Fragrance Materials Association (JFFMA)	35	N/A	49

Name (Japanese)	Name (Transcription)	Name (English)	Industrial Sector*	Founding Year	Total Members
日本ゴム履物協会	Nihon Gomu Hakimono Kyōkai	Japan Rubber Footwear Manufacturers' Association (JRFMA)	36	1956	17
社団法人　日本サッシ協会	Nihon Sasshi Kyōkai	Japan Sash Manufacturers Association (JSMA)	42	1947	168
日本色彩学会	Nihon Shikisai Gakkai	The Color Science Association of Japan	35	N/A	4
日本自動車工業会	Nihon Jidōsha Kōgyōkai	Japan Automobile Manufacturers Association (JAMA)	49	1967	14
社団法人　日本自動認識システム協会	Nihon Jidō Ninshiki Shisutemu Kyōkai	Japan Automatic Identification Systems Association (JAISA)	46	1986	168
日本自動販売機工業会	Nihon Jidōhanbaiki Kōgyōkai	Japan Vending Machine Manufacturers Association (JVMA)	46	1963	72
社団法人　日本住宅協会	Nihon Jūtaku Kyōkai	Japan Housing Association	52	1952	688
社団法人日本建材･住宅設備産業協会	Nihon Kenzai Jūtaku Setsubi Sangyō Kyōkai	Japan Construction Material & Housing Equipment Industries Federation (J-CHIF)	51	2005	166
社団法人　日本消火器工業会	Nihon Shōkaki Kōgyōkai	Japan Fire Extinguisher Manufacturers' Association (JFEMA)	35	1961	16
財団法人　日本消防設備安全センター	Nihon Shōbō Setsubi Anzen Sentā	Fire Equipent and Safety Center of Japan	N/A	1975	N/A
社団法人　日本照明器具工業会	Nihon Shōmeikigu Kōgyōkai	Japan Luminaires Association	46	1942	89
日本石鹸洗剤工業会	Nihon Sekken Senzai Kōgyōkai	Japan Soap and Detergent Association	35	1950	60
財団法人　日本繊維製品品質技術センター	Nihon Sen'i Seihin Hinshitsu Gijutsu Sentā	Japan Textile Products Quality and Technology Center (QTEC)	26, 27, 28	1948	N/A
財団法人　日本船舶標準協会	Nihon Senbaku Hyôjun Kyōkai	N/A	49	1969	N/A
日本大衆薬工業協会	Nihon Taishūyaku Kōgyō Kyōkai	Japan Self-Medication Industry (JSMI)	35	1971	83
日本暖房機器工業会	Nihon Danbōkiki Kōgyōkai	Japan Heating Industrial Association	44	1961	50
社団法人　日本通信販売協会	Nihon Tsūshin Hanbai Kyōkai	Japan Direct Marketing Association (JDMA)	86	1983	745
株式会社　日本鉄道施設協会	Nihon Tetsudō Shisetsu Kyōkai	The Japan Railway Civil Engineering Association (JRCEA)	49	1953	8751
社団法人　日本電機工業会	Nihon Denki Kōgyōkai	The Japan Electrical Manufacturers' Association (JEMA)	46, 47	1948	278
財団法人　日本電信電話ユーザ協会	Nihon Denshin Denwa Yūza Kyōkai	N/A	75	1976	94465**
社団法人　日本時計協会	Tokei Kyōkai	Japan Clock & Watch Association (JCWA)	48	1948	12
日本ニット工業組合連合会	Nihon Nitto Kōgyō Kumiai Rengōkai	Japan Knitting Industry Association	28	1975	15
財団法人　日本燃焼機器検査協会	Nihon Nenshō Kiki Kensa Kyōkai	Japan Heating Appliances Inspection Association (JCIA)	44	1958	N/A
社団法人　日本農業機械工業会	Nōgyō Kikai Kōgyōkai	Japan Farm Machinery Manufacturer's Association	44	1939	80
社団法人　日本パッケージデザイン協会	Nihon Pakkēji Dezain Kyōkai	Japan Package Design Association (JPDA)	36	1960	843

Name (Japanese)	Name (Transcription)	Name (English)	Industrial Sector*	Founding Year	Total Members
財団法人　日本発明振興協会	Nihon Hatsumei Shinkō Kyōkai	The Japan Society for the Advancement of Inventions (JSAI)	89	1953	N/A
日本筆記具工業会	Nihon Hikkigu Kōgyōkai	Japan Writing Instruments Manufacturers Association (JWIMA)	38	2001	65
財団法人　日本文化用品安全試験所	Nihon Bunka Yōhin Anzen Shikensho	Japan Recreation and Miscellaneous Goods Safety Laboratory (MGSL)	N/A	1975	N/A
社団法人　日本文具協会	Nihon Bungu Kyōkai	All Japan Stationary Association	38	N/A	87
社団法人　日本包装技術協会	Nihon Hōsō Gijutsu Kyōkai	Japan Packaging Institute (JPI)	36	1963	2021
社団法人　ニューオフィス推進協議会	Nyū Ofisu Suishin Kyōgikai	New Office Promotion Association	N/A	N/A	81
福井県眼鏡工業組合・全日本眼鏡工業連合会	Fukui-ken Gankyō Kōgyō Kumiai – Zen-Nihon Gankyō Kōgyō Rengōkai	N/A	37	N/A	N/A
財団法人　ベターリビング	Betā Ribingu	Better Living	52	1973	N/A
社団法人　レジャー・スポーツダイビング産業協会	Rejā Supōtsu Daibingu Sangyō Kyōkai	Japan Recreational Diving Industry Association (JRDA)	N/A	N/A	74
社団法人　労働科学研究所	Hōjin Rōdō Kagaku Kenkyūsho	Institute for Science of Labour	N/A	1921	N/A
日本工業標準調査会 (JISC)	Nihon Kōgyō Hyōjun Chōsakai	Japanese Industrial Standards Committee	N/A	N/A	N/A
(財)日本規格協会	Nippon Kikaku Kyōkai	Japanese Standards Association	N/A	1945	N/A
産業技術総合研究所	Sangyō Gijutsu Sōgō Kenkyūsho	National Institute of Advanced Industrial Science and Technology (AIST)	N/A	2001	N/A
製品評価技術基盤機構	Seihin Hyōka Gijutsu Kiban Kikō	National Institute of Technology and Evaluation (NITE)	N/A	2001	N/A
(社)人間生活工学研究センター (HQL)	Ningen Seikatsu Kōgaku Kenkyū Sentā	Research Institute of Human Engineering for Quality Life (HQL)	N/A	1991	72
国立身体障害者 ﾘﾊﾋﾞﾘﾃｰｼｮﾝｾﾝﾀｰ	Kokuritsu Shintaishōgaisha Rihabiritēshon Sentā	National Rehabilitation Center for Persons with Disabilities	N/A	1979	N/A
(財)共用品推進機構	Kyōyōhin Suishin Kikō	The Accessible Design Foundation of Japan	N/A	1999	57
交通エコロジー・モビリティ財団	Kōtsō Ekorojī – Mobiritī Zaidan	Foundation for Promoting Personal Mobility and Ecological Transportation	71	1994	57
(財)高齢者住宅財団	Kōreisha Jūtaku Zaidan	Foundation for Senior Citizen's Housing	52	1993	131
貿易振興会 (JETRO)	Bōeki Shinkōkai	Japan External Trade Organization	N/A	1958	N/A
日本人間工学会	Nihon Ningen Kōgakkai	Japan Ergonomics Society	N/A	1964	N/A
日本ﾘﾊﾋﾞﾘﾃｰｼｮﾝ工学協会	Nihon Rihabiritēshon Kōgaku Kyōkai	Rehabilitation Engineering Society of Japan (RESJA)	N/A	1986	N/A
日本生活支援工学会	Nihon Seikatsu Shien Kōgakkai	Japanese Society for Wellbeing Science and Assistive Technology	N/A	N/A	69
				average age: 44 years	

Source: Own compilation according to the association websites

Table 2: Relevant business associations, matched with major industries

Industrial sector	Number of business associations	Percentage
1 Ores and minerals; electricity, gas and water	2	2.0
2 Food products, beverages and tobacco; textiles, apparel and leather products	11	11.2
3 Other transportable goods, except metal products, machinery and equipment	32	32.6
4 Metal products, machinery and equipment	36	36.7
5 Construction work and constructions; land	5	5.1
6 Trade services; hotel and restaurant services	1	1.0
7 Transport, storage and communications services	3	3.1
8 Business services; agricultural, mining and manufacturing services	8	8.2
Total	98	100.0

Source: Chart compiled by authors.

As an illustration, the activities of three leading associations are sketched:

– **Kyōyōhin Foundation:** The foundation continues the activities of the E&C Project of 1991, which has focused on surveys and standardization, and was founded in 1999. Its focus is on universal design, a design strategy which develops products and services for elder people without neglecting other customer segments (other common terms are "design for all", "inclusive design" or "accessibility"). The foundation aims at diffusing universal design products and services, and to develop specific quality requirements. Their White Book publishes also definitions, reports on market growth and markets forecasts. Definitions of the market seems to be somewhat sophisticated but they play a central role in the perception of reality since they make a diffuse idea – silver market, universal design – much clearer and help firms to identify where at all new opportunities may emerge. The results of market forecasts are diffused to the members. Moreover, seminars on the silver market are offered. Data are collected from 1995 onwards. In a forecast of 2005, e.g., arguments for the necessity of developing universal design products for selected subsectors are listed, such as elevators, vending machines, busses or cameras (KSK 2007). With the legal form of a *zaidan hōjin* (incorporated foundation), the association belongs to the group of "approved associations" (in this case by the METI) so that the ministry has periodically to approve the association's objectives in order to have the option to obtain subventions and tax allowances.

– Since 2003, leading companies have broadened their activities towards a more encompassing setting, establishing the **International Association for Universal Design (IAUD)**. Most members are still Japanese enterprises, however. IAUD is dominated by large-size enterprises: Among its 143 regular members (as of September 2008), 77 are from the First Section of the Tokyo Stock Exchange, a further 31 are subsidiaries of First Section companies, one is from the Second Section and only 34 are not related – or at least could not verified to be associated – to either section. Like the Kyōyōhin Foundation, the IAUD is particularly interested to raise public awareness about UD, for instance by introducing the concept in schools, universities and by seeking contacts with the state. In 2006, the association has launched a major international conference on UD in Kyoto. One issue of particular interest during that conference was how UD is to be promoted further, either through state activities (for instance, prescribing certain product features), or fostering the concept through "soft" measures like awards or open competitive biddings. Participants are said to have agreed that the latter approach should be taken (UD e.V./TUM 2008).

– **ESPA** (Elderly Service Providers Association / Shirubā Sābisu Shinkūkai). This foundation intends to support the development of the silver market by focusing on the service industry, especially on care and welfare. This association also diffuses the results of their market research to their members, and offers specialized seminars. With the legal form of a *shadan hōjin* (incorporated association), the association belongs to the group of "approved associations" (versus voluntary associations) that are quite close to the regulating agency (in this case, the MHLW).

Referring to the criteria of get-at-ability, centrality and credibility, we conclude:

– *Get-at-ability:* The long establishment facilitates the transfer of sticky knowledge. The experience in information dissemination should enhance efficiency.
– *Centrality*: The high specialization of the associations (e.g. The Japan Federation of Medical Devices Associations, The Japan Small Cutting Tools' Association or Japan Automatic Identification Systems Association) eases the handling of highly specified information. The long standing membership in many associations makes it for the associations easier to deliver central information. The innovation pattern, mainly through diversification, is complementary to the institutional structure that favours proven insiders within established economic groups (Hata et al. 2008: 152).
– *Credibility*: Long-standing personal networks which are facilitated by regional nearness – associations are established in Tōkyō, where most firms have their head office – increase the credibility of the information supplying association.

Reviewing the evidence presented so far we notice that both initiatives of business to reduce the cost and ambiguity of information have been important (Hypothesis 2). The significant degree in which private and public actors are intertwined becomes even more obvious when the role of the state is more closely taken into account.

Hypothesis 3: (General) Regulation and standards-setting by politics are an important venue for market creation. It lies in the firms' strategic interest to influence these processes.
(Specific) One condition for the early creation of Japan's silver market has been an early formulation of national regulation and quality standards.

In some fields, there is also some "hard" regulation, although generally speaking it is less prevalent in silver industry than for a number of high-tech industries that potentially pose serious health or environmental hazards (Rao and Singh 2001). An important case is barrier-free products (of course, only to some extent related to the silver industry). Long-term government planning and legislation developed after a Year of the Disabled in 1981, the UN launch of the Decade for the Disabled in 1983 and some surprisingly effective lobbying of civil society pressure groups (Heyer 1999). This resulted, among others measures, in a 1984 revision of the Law for the Welfare of Physically Disabled Persons, a 1994 law for easier access to public buildings and, in 2000, a "Law for Promoting Easily Accessible Public Transportation Infrastructure for the Aged and the Disabled." In a comparative study commissioned by the International Facility Management Association on the perceptions of so-called inclusive design for facility management among manufacturers and retailers around 2003, it was found that government regulation, guidelines and standards are important drivers for Japanese companies, while a notion of a "potential market" seems less important (see table 3).

Table 3: Drivers for the introduction of inclusive design in business facilities of Japanese and UK companies

Drivers	Survey in Japan	Survey in the UK	
		Manufacturers	Retailers
Consumer dissatisfaction	77.0 %	78 %	81 %
Potential market	44.8 %	74 %	81 %
Guidelines and Standards	53.7 %	43 %	50 %
Government regulations	50.9 %	48 %	44 %
Fundamental techniques / Tools and methods	42.9 %	48 %	56 %
Consumer/Public awareness	42.3 %	39 %	69 %

Source: Dong et al. no year (ca. 2004), Data Appendix

Seen in perspective, the development of the silver market in Japan is progressing in a peculiar co-evolution of private business and state activities. While the Japanese state is clearly helpful when the provision and diffusion of information is concerned, it can be noted that the "harder" the regulation gets, the more doubtful it is that the state can make a significant contribution. In the case of facility management, the government basically sets minimum standards for accessibility and leaves actual business policy to the enterprises. Consider the example of lifelong learning, however. In that case, the Japanese state has ma-

ny instruments at its disposal, including authorization of certain schools, definition of curricula leading towards standardized certificates and massive subsidies. Moreover, the Ministry of Education, Culture, Sports, Science and Technology (MEXT), the former *Monbushō*, has earned a reputation – or notoriety – of being quite proactive in its policy approach. *Monbushō*, as well as MITI, now METI, have become active through certification examination programmes, the support of regional programmes, introduction of courses in national universities, etc. There have been many doubtful comments, however, criticizing that the local level is deprived of self-governing, that the processes are too bureaucratic, etc. (Gordon 1998).

Overall, state action (Hypothesis 3) has been helpful when it is in line with other forces, like those related to processes that reduce information asymmetries (Hypothesis 2). This view is supported in the already mentioned survey on universal design, undertaken on behalf of the International Facility Management Association: Lack of resources or guidance and the lack of business cases are much less of a barrier for Japanese companies than in the UK (see Table 4).

Table 4: Comparison between perceptions of barriers to introduce universal design in facilities of Japanese and UK companies

Barriers	Survey in Japan	Survey in the UK	
		Manufactures	Retailers
Technical complexity	39.1 %	26 %	60 %
Lack of business case	39.1 %	57 %	53 %
Unable to achieve	39.1 %	30 %	40 %
Lack of knowledge, technique and methods	36.8 %	39 %	40 %
Lack of resources or guidance	34.5 %	48 %	53 %

Source: Dong et al. no year (ca. 2004), Data Appendix

In hypothesis 4, we will take a closer look at the organizational features and the resource endowment of relevant enterprises.

Hypothesis 4: (General) Inter-firm and intra-firm resources and organizational features are important in helping companies to recognize and embrace novel business opportunities.
(Specific) In the Japanese context of an emerging silver market, the industrial "environment" of networking companies has been important, including resources contained in the core competences of firms, and overall knowledge sharing-friendly structure of firms.

Large, established enterprises that are so prominent in the emerging Japanese silver market already bring considerable technological resources to the new field. Following the "related varieties approach" and Porter's "diamond" argument, firms strategically select those sectoral fields, in which the specific national setting and their core competences show a certain matching (Casper 2003; Casper and Whitely 2002; Casper, Lehrer, Soskice 1999; Porter et al. 2000). If one differentiates basically between three paths inside the silver market that may be chosen – (a) conventional, standard aged care techniques, (b) robotics, and (c) barrier-free technology, involving incremental improvements to existing technologies (Dethlefs and Martin 2006) –, it is quite clear that Japanese companies do not possess considerable competitive advantages with respect to the first option due to the well-known weaknesses in the service industry. As for robotics, Japan is blessed by favourable factor input conditions, like the availability of engineers with an accumulated know-how in electronics and machinery, it profits from a high intensity of local competition – there already were some 300 producers of robotics equipment by 1987 and some of them use robots themselves –; moreover, there are favourable local demand conditions, including open-minded customers favouring novelty and demanding industrial clients; finally, this all leads to and is combined with a dense network of (potential) subcontractors and linked industries (Porter et al. 2000). With respect to the third technological path, non-cutting edge modifications towards barrier-free technologies, this is well in line with the competencies of large segments of Japan's manufacturing industries in continuous improvement and total quality control. Such competitive advantages are hard to imitate, as they depend on tacit resources like employee empowerment and executive commitment (Powell 1995), and thus give Japan a considerable competitive edge. To give but one example, Panasonic has developed

a packing for hearing aid batteries in which a small slip of plastic foil is attached to the tiny batteries; this makes it much easier for elderly (or handicapped) people to insert the batteries into their hearing aid (UD e.V./TUM 2008: 65). While certainly no high-tech invention, such improvement is only possible through a dedicated teamwork of marketing, sales, production and development, and it needs fine-tuned and high-quality production and packaging for execution – i.e., traditional virtues of many Japanese enterprises.

We have so far concentrated on the proprietary resources of individual Japanese enterprises. However, there is a tension with pronounced efforts at creating a rich industry-wide information base, as such an environment tends to diffuse relevant information and could undermine appropriable competitive advantages. Cooperation serves two important purposes, however: to overcome a myopic tendency within companies to disregard the long term opportunities of the silver market for short term savings, and to support awareness creation among customers to translate potential needs into marketable demand. By creating a common vocabulary and outlook, among the industry sector and beyond, in state, education, media and the populace at large, awareness of the chances of the new market is raised within all layers of each company and among customers.

The role within enterprises to overcome myopia is possibly even bigger than the importance on the market side. For instance, the mechanism of creating a wide information network has also been used in cases, which are purely supply-side and not demand-side. A case in point is the campaign of the 1980s to promote a "softer", more quality-oriented and less energy-intensive economic system – the so-called softnomics initiative of the Ministry of Finance, involving business associations newly established foundations etc., very similar to the issues discussed in this paper (Harada and Pascha 1987).

Related to specific mechanisms of knowledge creation and knowledge sharing, Japanese firms are known for a tradition and emphasis to influence their staff through slogans or keywords that communicate certain messages (Pascha and Haaf 1994, Feldmann 2007). An alert cognitive framing allows firms an ex ante common understanding of future innovation paths, which contributes to an easier search process for innovations (Takeuchi and Nonaka (eds.) 2004). Examples in the "silver" automobile industry include Toyota's concept of the "Raum" car as a new concept of lifestyle (also able to carry a surfboard or other bulky stuff; Moerke and Kamann 2005), the "Porte" of Toyota's fleet (Macdonald 2006) or, also of Toyota and already in the 1960s, the Welcab (from "welfare" and "cabin"), Honda is engaged in "welfare vehicles", Nissan promotes a "life care vehicle qualified shop system" and Mitsubishi Motors follows a concept named "Hearty Run", to name but a few examples (Moerke 2008). Further evidence is necessary, but it seems that these phrases encompass more than just "product names", namely new concepts of lifestyle, thus working as an important cognitive framing mechanism also within enterprises.

Summing up, given core competences on one side, and a high level of alertness towards silver market on the other side, allowed Japanese firms to endure the difficult period of high ambiguity during the gestation of the new market. The costs of being involved in contributing to the public good of public awareness - that also serves their immediate competitors - seems to be easily over-compensated by the benefits of overcoming myopia and developing highly promising novel business opportunities.

5 Conclusion and Implications

In this paper, we have looked into the creation of new markets and taken Japan's silver market as a case in point. What have we learned about this multi-billion dollar market of the future, in which Japan seems to be on track to expand its lead position, and what does this tell us about the creation of new markets in general?

We started with the expectation that economic, cognitive, and political forces play a role in developing strategic entrepreneurship – the three approaches distinguished by Companys and McMullen (2007). Simply referring to the promise of the eventual size of the silver market was clearly found insufficient as an explanation for market creation because of the uncertainties that could hinder a given company to reap eventual benefits. This is in line with approaches on how to develop competitive advantage, in which future demand is but one factor (seminal: Porter 1990).

How can short-sightedness on the company level be overcome? Using Japan as a case, we come to the following conclusions: A cultural determinism (Hypothesis 1) could be discarded, as cultural traditions are much more varied in Japan than stereotypes of Confucian-style respect for age or filial piety may suggest. Moreover, the long-term orientation and the uncertainty avoidance of Japanese managers could also help them, in the latter case somewhat surprisingly, to develop a positive attitude towards change.

The supply and diffusion of information by various state organs, business associations and firms is conspicuous, as was expected from an economic approach to market creation (Hypothesis 2), but it was found that information-related processes go far beyond a simple collection and distribution of factual data. The information-disseminating organisations succeeded in becoming part of the knowledge stock of firms due to the properties of get-at-ability, centrality and credibility of the information supplied. This implies that attention towards and recognition of relevant phenomena is much more plastic than expected, and this seems to be an important aspect when facing newly emerging phenomena in Japan.

Further, the role of the state is a helpful one (Hypothesis 3). "Hard" regulation is less important for silver industry than for many other global industries like biotechnology with its potential hazards. Still, where regulation does play a role, like in the move to prescribe the introduction of barrier-free technology around 1990, it did give Japanese silver products in this field a crucial push. Policy networking may also create potentials in opening up international markets, particularly through international standard-setting (DKE 2007; compare further Iizuka 2004; JISC 2003; Kyōyōhin 2007a) where experts ascribe Japan a "certain leading role" in the enlargement of international technical standards to accessibility (DKE 2007; compare further Iizuka 2004; JISC 2003). The Kyōyōhin Foundation, an approved private association by the METI, had the chairmanship for the standard 71, the "Guidelines for standard developers to address the needs of older persons and persons with disabilities" which has been published in 2001, and which is a common guideline of ISO and IEC (ISO/IEC Guide 71). This standard aims at informing and raising awareness "about how human abilities impact on the usability of products, services and environments" (ISO 2001) by assuring "accessibility" or, less technically, the "universal design" of products and services. The ergonomic content is new since most technical norms have focused on metrological measurement and other usage properties. Concrete applications are e.g. white goods (household appliances), machines (vending machines, ATM), printer, fax machines and ICT technologies in general, thus sectors and technologies, where Japan possesses relative comparative advantages. Related to accessibility, Japan holds in the ISO further positions in other subcommittees (JISC 2003). In order to increase its impact in ISO further, the Kyōyōhin Foundation seeks cooperation with Asian standardization organisations, especially for the suggestion of sector-specific standards building on the standard 71 (Kyōyōhin 2007a). These observations contrast with other new markets where Japanese firms were not able to formulate standards on the national or the international level (Storz 2007). One reason may lie in the better networking of firms in the silver market since many of them belong to the core actors in dominant industries.

It is noteworthy that Japanese business brings to bear a number of valuable resources to develop the silver market (Hypothesis 4). First, at least parts of the silver industry – apart from directly supplying services to the elderly – can profit from well-established core competences. This holds for robotics, which profits from manufacturing expertise, and for barrier-free products that rely on incremental innovation, another Japanese strength. The dominance of well-established, large enterprises like Toyota, Hitachi, Toshiba, etc. in the emerging silver industry seems to be a consequence of these technological trajectories. This gives Japan an additional plus when utilising the wide inter-firm networks, encompassing also the state sector, that have played such an important role in Japan's business history (see Hall and Soskice 2001, for instance). Institutional constraints, as recently stressed in the innovation literature (compare for a short overview Storz 2008) may thus, in a pointed way, be interpreted as turning into comparative advantages.

What can we learn beyond the case of Japan's silver industry itself?

We have seen that Japanese firms do not have an inbuilt inability to create novelty as is sometimes suggested. At least in cases where established enterprises can utilise their peculiar resource endowment and where one does not need to rely on Japan's (weak) venture sector, its firms can be very successful.

The plasticity of available institutions and technologies on the one hand, and the ability of strategic selection of appropriate subsectors should not be underestimated. With Nelson (2008) and Granovetter (1985) we would thus like to argue against "over institutionalisation".

Further, it became clear that an important mechanism to overcome cognitive path dependencies is soft regulation in the sense of transforming established expectation models by information-oriented, credible policies, both involving the state and business. While it has sometimes been argued that Japanese information networks serve to exclude outsiders and foreigners, we notice a different function here: to influence the cognitive realization, thus overcome myopia and create positive external economies for all actors involved.

Finally, our paper has several limitations: The most important one is perhaps that we choose a broad approach, necessarily neglected the detailed processes which led to new expectation models towards the new market. For example, we did not investigate why associations or councils were more open towards information on ageing and how they were able to link this with market opportunities. However, our paper presents ample evidence for the assumption that markets do not just ãspontaneously emerge", but that they are created by a multiplicity of actors. We conclude that research on market creation has a fruitful life ahead.

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