November 2011

Regional specialization and the drinks industry

The newsletter of the RSAI   *New Series 6: November 2011*

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1 Introduction

1.1 Welcome from the President: Yoshiro Higano

Welcome to the latest newsletter. On behalf of the Regional Science Association International (RSAI), I would like to invite you all to attend the 9th World Congress in Timisoara, Romania next May.

As you know, RSAI has three super-regions, the European Regional Science Association (ERSA), Pacific Regional Science Conference Organization (PRSCO), and RSAmericas (North American Regional Science Council and Latin American Sections). Each of these has different histories and backgrounds but all have encouraged the mutual exchange of ideas under the umbrella organization of RSAI. Each conference has been organized separately by each super-region but the World Congress, initiated in 1980, is truly an RSAI international meeting in the sense that it has been set up as a truly global conference, normally in regions of the world where we wish to develop regional science. RSAI still needs to be active in countries where official RSAI Sections have not yet been established. This is also one of the major reasons the RSAI Council Board is composed of delegates from the three super-regions. The RSAI Council aims to promote regional science not only from local/domestic/superregional perspectives but also taking into account a truly international and global view of our community.

Since 2008 our friends, led by Prof. Daniela Constantin (President of the Romanian Regional Science

Association: an active section of ERSA and RSAI building bridges to Eastern and Middle Europe) have unselfishly prepared for the successful organization of the Congress. Our Romanian friends are very keen to welcome all of you and your families to Timisoara. Timisoara is a most beautiful city in every sense and people living there have progressive and enterprising spirits. You will enjoy not only the academic activities scheduled for the Meeting but also the historical and cultural exchange with friends from all over the world.

The next world Congress is a good opportunity for us to understand and realize that we are all part of RSAI in every sense. I cordially invite your active participation in the Congress.

I am looking forward to seeing you soon in Timisoara.

Yoshiro Higano, President of RSAI

1.2 Welcome from the Editors

*Graham Clarke and
Eveline van Leeuwen*

The editors are pleased to welcome you to this newsletter exploring the issue of the importance of the drinks industry in regional economies – no we do not mean the consumption of alcohol at our meetings (which might indeed inject much needed revenues into local economies) – but the importance of local specialized production of (alcoholic) beverages. To this end we visit

Scotland, Greece and Japan. We also introduce another Fellow (T.John Kim) and the important regional research centre at the University of Barcelona in Spain (fantastic hosts at the recent ERSA conference). Furthermore, there is more news and information on the World conference, also introduced by our President in his welcome. Once again we hope you enjoy the newsletter. Eveline and Graham

2 Regional specialization and the drinks industry (1): The Scotch Whisky Industry

Mike Danson and Geoff Whittam, University of the West of Scotland

Scotland is blessed with a number of iconic cultural symbols which are recognisable across the globe: tartan, kilts, and, of course, Scotch Whisky being but the leading examples. They are at the core of promotion strategies, whether it be in the marketing campaigns of 'Scotland the Brand' or of the Scottish tourist authorities (VisitScotland) (Burnett and Danson, 2004). There have been some criticisms in these being used as a key component in attracting inward investment in economic development strategies. But, in the case of Scotch Whisky in particular, behind the imagery there is a

truly massive industry with a genuine worldwide market reach. With sales in excess of £3.5bn into more than 200 countries, different stages of the production process located across the country, and as the basis for an unrivalled drinks cluster, this is a sector worthy of detailed analysis. A decade ago we were commissioned jointly by the trades unions and the trade body for the employers, the Scotch Whisky Association, to undertake a study of the current and future prospects for the industry. This article is based upon that research of Roper et al 2006, which was both well received and generated invitations to submit evidence to the lower chamber of the UK Parliament, the House of Commons, and to present at conferences and to publish academic papers (see references below).

The essential spirit of Scotland is captured by Scotch Whisky: malt whisky (the traditional form of this uisge beatha Scots Gaelic for the "water of life") is distilled in the Highlands and Islands, matured and bottled in the Lowlands, and consumed throughout the world. Scotch Whisky is the mainstay of many communities throughout Scotland. Fragile rural areas in the north and west depend on a few jobs in scattered production sites and significant employment is provided in the bottling plants of the central belt. Most (about 90%) Scotch Whisky consumed now has a grain whisky base with a mixture of malts added, and these grain whiskies are produced in the central belt of Scotland. Work is provided at several stages of the production process: distillation, maturation, blending, bottling, packaging, distributing and marketing. Growing from little more than a cottage industry at the end of the C19th century, Scotch Whisky is now a sector dominated by massive multinational corporations producing integrated operations, which link plants and activities throughout the whole of

Scotland. At the same time, much smaller companies, some still private, continue to be active in the industry.

Bowmore Distillery, Islay

The industry impacts on many communities and suppliers across Scotland through its linkages particularly to agriculture, the utilities, packaging, distribution and tourism, but also to many other sectors.

After early resistance to Scotch malt whisky, the use of Scotch grain whisky to create more palatable blended drinks has led to the establishment of a major sector. In past years, helped and occasionally hindered by such diverse factors as problems in the vine crop, the period of prohibition in the USA, the rise and fall of the British Empire, the Scotch Whisky industry has evolved into a mature product and sector.

More than any other consumer product, Scotch Whisky requires the long term investment of capital over long periods (in order to secure the quality for which it is famous, and to meet the regulatory requirement which underpins it). While it is important to recognise that the industry does not wish to remove the maturation requirement, at the same time it does mean, of course, that capital is committed over long periods of time, imposing peculiar economic costs on the sector. By law, and the industry's own regulation, Scotch Whisky must wait after the initial distilling to mature, a key characteristic is the need for both

substantial capital to fund maturing stocks and stability in the market to be able to realize past production decisions.

A dram of malt whisky

Whisky can be and is made elsewhere: Japan, North America, the Republic of Ireland and Northern Ireland. Whilst Scotch Whisky outsells these and is dominant internationally, it is constantly challenged by these alternative whiskies, as well as by significant trends in fashionable drinks. Younger more affluent consumers in the UK have been encouraged to start with lighter white spirits, ready mixed drinks, designer beers and wine.

That many of the larger producers in the Scotch Whisky industry are in these markets also, raises further concerns for the sector. Conglomerates involved in several of these rival markets have the potential to meet threats from such competitors by shifting production between spirits. Significantly, however, the larger enterprises in the industry are producers of a range of white spirits (e.g. gin, vodka, Bacardi, etc.), and many of these activities are being located progressively in Scotland. Much of this movement is a recent phenomenon, but has been a growing feature of the industry in Scotland and beyond. The definition of the Scotch Whisky industry consists of the manufacture of distilled, potable, alcoholic beverages. These activities are

covered by class 15.91 of the Standard Industrial Classification of economic activities (SIC(92)). This class includes the production of other white spirits e.g. vodka and gin, brandy, liqueurs, etc., but the dominance of Scotch Whisky means that the vast majority of the output in class 15.91 is accounted for by the production of Scotch. This definition includes other stages in the industry: blending, bottling, packaging, and warehousing, as well as the initial distillation.

The Size of the Sector and the Key Players

Having evolved from the cottage industry of the late 1800s through an ongoing series of mergers and take-overs, the Scotch Whisky industry displays some notable characteristics. Not least of these are the dominance of a relatively few players, the vitality of the medium range of producers with their own integrated production and marketing operations, and the survival of a competitive fringe – able to purchase Scotch Whisky direct from the distilleries and blend and bottle their product to their own recipe. A web of intricate interdependencies between different stages of production and different players underpins the healthy state of competition in the industry.

A measure of this concentration ten years ago was that three major players then – Diageo, Allied-Domecq and Pernod-Ricord – controlled about 80 per cent of all Scotch Whisky production, with the second level of companies – including Highland Distillers, Whyte & Mackay, William Grant and Glenmorangie – contributing a further 10 per cent. While Allied-Domecq withdrew, Diageo now accounts for about 34%, Pernod-Ricord lies in second place, and the largest independent, William Grant, produces 10.4% of total Scotch output. The pre-eminent position of the big two suggests an industry under a potential

threat of duopoly pricing and output decision-making, with production collectively reduced to maximise profits. The conduct and performance of the sector is critical, therefore, in guarding against this and yet there is a need for much more objective and non-partisan research and commentary than is currently available.

The latest figures available from the industry, (Verso 2010), show that the industry directly employs over 10,000 people and generates a gross income of over £464 million contributing a Gross Added value (GAV) of £2.7 billion to the Scottish economy. Furthermore it has been estimated that the industry supports in excess of 34,000 jobs in other sectors. Whilst employment within the industry in Scotland has declined by 3% over the last decade there has been a decrease in employment within the industry outwith Scotland of 12%. The industry within Scotland has witnessed an increase in employment in sales and marketing, engineering, visitor centres and by-products with a decline in distilleries, blending and bottling. Latest figures show exports growing by 22% in the first half of 2011 to £1.8bn with the USA still the leading market, followed by France. Emerging economies are fuelling much of the expansion in demand in recent years with South Korea, Brazil, Central and Latin America, and Asia all seeing strong growth of over 33% per year and by more than half in several cases.

The increase in employment within visitor centres signifies the close links between the whisky industry and tourism sectors. There are now 52 whisky centres and distilleries which are open to the public and it was estimated that they attracted over 1.3 million visitors in 2010 with a spend of over £26 million (4-consulting 2011). The centres employ directly 460 people with an estimated indirect employment count of a further 180. Additionally it is argued that the

distilleries with visitor centres act as a 'cluster' for other sectors notably sport and recreational leading to further employment in term of, for example, accommodation.

Whilst the imagery used to promote sales are primarily in terms of the Highlands and Islands of Scotland (Burnett and Danson, 2004), the majority of the employment is within the urban areas of Scotland, with Strathclyde accounting for over 50% of direct employment in the industry. In contrast the Highland region accounts for approximately 5%. However, given the fragile nature of the Highland community a small number of jobs within a distillery constitutes a significant amount.

Morar in 'Rough Country' in West Highlands, typical of areas where whisky traditionally produced in former times.

The fairly rapid transmission of fluctuations in demand to current production are a characteristic of the Scotch Whisky industry. This is surprising given the long lead-time between the initial distilling and the final sale; this suggests that optimistic market forecasts, past overproduction and excess capacity are significant factors in this reaction also.

The concentration of production in the hands of two multi-national and multi-product enterprises, coupled with the legal requirement to distil Scotch in Scotland, means that with massive outputs to be bottled here their other spirits have also moved to be bottled and produced in Scotland. Malibu (made from coconuts), London's Gordon Gin, many vodkas and other white spirits are therefore made in Scotland – a bottling glen cluster has been created to the benefit of the MNEs, the UK Chancellor and to an extent the Scottish economy.

Isle of Eigg – now owned by the community and potential location for new community-managed malt distillery.

In concluding our initial report a decade ago, we speculated on various developments challenging the Scotch Whisky industry. One issue we identified was that both the UK Exchequer and the MNE duopoly gained very large taxes / duties and profits respectively from this domination. Scotland, in a UK with a significant degree of devolved powers but excluding fiscal responsibilities, could gain markedly from a move to re-open and re-energise the traditional 'craft-based' distilleries of the Highlands & Islands at the expense of the mass grain production units in the Lowlands. For an independent Scotland, a balance between the current cash cow and the latter strategy would likely offer a better future, improving backward linkages into the local and regional economies of the nation.

To enter into a discourse into such matters we strongly recommend you to review the arguments of product quality by visiting any bar in the world and asking the staff about the whiskies

available. Deepening the relationship between product, place and consumer will not come from the large MNEs, but pressure from you can but help.

Slàinte!

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3 News and Recent Events

3.1 RSAI summer school 2011

Tomaz Dentinho, University of the Azores

The Regional Science Association International and the Portuguese Association for Regional Development organized a Summer Course, with the theme Regional and Urban Economics, Theory, Analysis and Operational Models, that was held in Terceira from the 13th–21st of June 2011, Azores, Portugal.

The goal of the Summer Course was to provide PhD-students and young researchers with:

- Advanced training in regional and urban economics,
- An opportunity to present and discuss their research,
- Improved skills and knowledge to advance their careers as researchers.

The summer course took place along ten highly focused and intense days of advanced training, student presentations and discussion, and discussion of career strategies. It also included a study visit to another island thus completing the unique experience of the summer course!

The summer course was focused on the issue Regional and Urban Economics, Theory, Analysis and Operational Models, using a format of combined lectures and hands on training provided by top-level experts. Participants were selected by the scientific committee primarily taking into account their research experience in one or more of the topics of the summer course and their motivations for participation in the Summer Course (extended abstract) in terms of career aspirations. There were 40 applicants and a final selection of 21 students from 10 countries. The lecturers consisted of well-known researchers from all over the world, such as Henk Folmer, Mark Partridge, Alessandra Faggian, Ping Wang, Eduardo Haddad and Jose Pedro Pontes.

Tomaz Dentinho (left) with the course delegates

The evaluation of the summer school indicated that the students liked the organization of the course, the diverse subjects, the quality of the lectures and the discussion of their own draft papers in the session "How to publish a paper".

The RSAI looks forward to helping promote more summer schools in the future – watch this space!

3.2 ERSA 2011

Jordi Suriñach and Vincente Royuela, University of Barcelona

The 51st ERSA conference held in Barcelona, Spain, 30st August – 3rd September achieved all its goals: around 1000 registered participants, from 50 countries, 220 parallel sessions, 50 special sessions, good food, a nice atmosphere and even a football match. This successful event took place in a time of great financial restrictions, which imposed a lot of extra work on the organisation team to make good financial resources and avoid any important shortages.

In our mind, logistic and financial issues were always conditioned to our main objective: the academic excellence of the conference. Top keynote speakers came to Barcelona: Richard Florida, Diego Puga, Maryanne Feldman, David Audretsch and Piet Rietveld. We also had a plenary lecture with the Commissioner of Regional policy of the European Commission, Dr Johannes Hahn, who was accompanied by Joaquim Oliveira-Martins (OECD) and Luis Espadas (Spanish Ministry of Economy and Finance), giving an unforgettable discussion on the future of the European Structural Funds. The conference also enjoyed the presence of the Major of Barcelona, the Regional minister of Finance, the Vice-president of Spain, and the president of the European Investment Bank.

High attendance rates during the plenary sessions

The highest academic quality was achieved during every minute of the conference. It was thanks to all delegates who sent their best papers and made impressive presentations of their work. In addition, this year the ERSA conference highlighted in the program, and at the venue, some 'Very Special Sessions', with a fantastic panel of high level academics. Finally we also

welcomed the meeting of the Urban Economics Association, which was for the first time organised in Europe, and a high level session labelled The New Urban World, which ran over one full day with a superb panel of speakers.

Piet Rietveld during his EIB-ERSA prize speech

The social program of the conference included a reception at the Royal Palace and the Gala Dinner at the National Museum of Arts of Catalonia, the best location to end, according to many delegates who approached us: all in all, a terrific end to the conference.

Finally, if you want to remember the conference of Barcelona, we invite you to see the videos of all plenary sessions at the conference website: http://www. ersa.org/ersa-congress/: more than 15 hours of the best regional science and urban economics!

3.3 RSAI historical accounts

Tomaz Ponce Dentinho, RSAI Executive Director

RSAI historical accounts from 2004–2011 (Figure 1) show that Receipts and Payments grew in nominal terms between 2004 and 2009 when they reached around £35000 (UK) per year. During these years we can note that receipts grew faster than payments,

which allowed the growth of total assets (Figure 2). Since 2009, receipts have grown less than payments creating a negative margin that reached £11000 in 2011; therefore total assets also decreased.
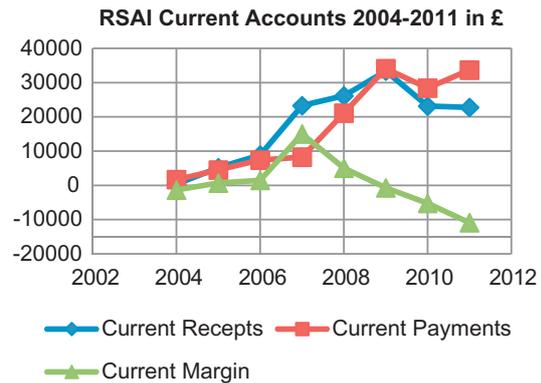
Fig. 1. RSAI Current Accounts from 2004–2011
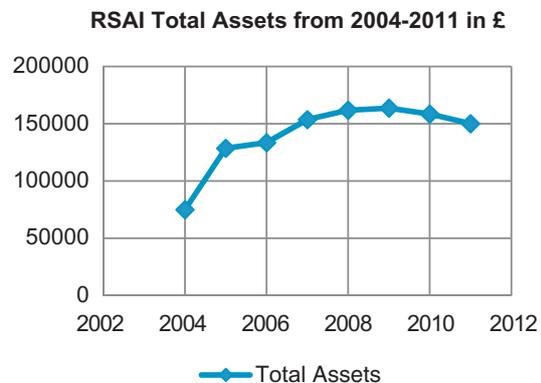
Fig. 2. RSAI Total Assets from 2004–2011

Figure 3 shows the evolution of the structure of RSAI Current Payments. In 2010 our two journals RSPP and PIRS represented more than 55% of the total expenditure; Accounts, Newsletter, Web and Management 36%; and support to new sections 9%. In 2011 RSPP and PIRS will represent more than 57% of the total expenditure; Accounts, Newsletter, Web and Management 24%; and support to new sections 20%.

Evolution of Current Payments
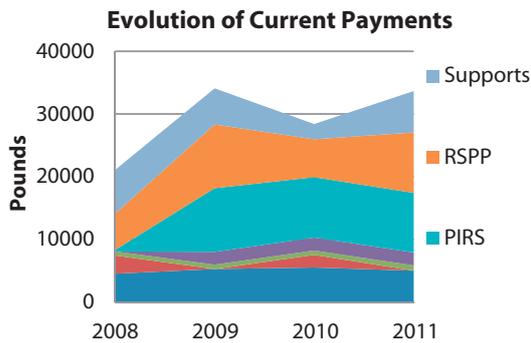
Fig. 3. Structure of RSAI Current Payments

The RSAI council hopes that as the membership increases further the revenues will increase as well. Also, the more successful the journals the greater we expect the revenue stream to be.

4 Meet the fellows: Tschangho John Kim

Endowed Professor of Urban and Regional Systems at University of Illinois at Urbana-Champaign (UIUC)

I began my education in my native South Korea in Architectural Engineering, studied Urban Design at Meistershule für Architekture, Akademie der Bildenden Künste in Vienna, Austria, and completed graduate study in planning at Princeton University with a Ph.D. degree in 1976.

I was first introduced to Regional Science by a colleague of mine, a Ph.D. student at Princeton, who showed me Walter Isard's 'Green Book'. The book opened my eyes at the time when I was struggling with searching for suitable methods for solving urban and regional problems. Luckily I met Professor Edwin Mills who taught me economic principles, which I integrated with regional science methods. This was the beginning of my wonderful career as a planner, engineer and regional scientist, searching for strategies for solving spatial settlement issues.

I am very proud of the career I have chosen following in my father's footstep as a university professor, having chosen urban planning and regional science as my main focus of discipline. I must have done something good since my son also has chosen to be an academic. Equipped with socio-economic theories based on engineering education and regional science methodologies, I have had a wonderful career.

In addition to publishing 8 books, 140 journal articles, book chapters, and professional articles in the areas of transportation planning, urban and regional development, global urbanization, geographic information systems, intelligent transportation systems and location-based services, I was fortunate to gain experience in solving real-world problems. In 1979–80, I served as the project director of the National Comprehensive Transportation Study of Korea, sponsored by the World Bank. I also directed the Optimal Transport Sector Development Project in Indonesia in 1990–1991. I have been an advisor to the ArRiyadh Development Authority (ADA) in Saudi Arabia since 1994. I have been a Fulbright Scholar to Germany (1986) and Senior Fulbright Scholar to Korea (1994–1995).

Furthermore, I have served as International Conference Coordinator of

the Regional Science Association (1988–1991); co-Editor of The Annals of Regional Science for the period of 1994–2005; a member of Council, Regional Science Association International (2008–2010); and served as President of the Western Regional Science Association (2008–09).

My research contributions are intended to advance both planning scholarship and practice surrounding issues of growth and change. As a regional scientist, I have searched for theories and methods that provide a framework for developing and evaluating realistic strategies for mitigating problems caused by human settlements, environmental degradation and economic growth in urban areas. As a planner, I have been a strong advocate for the practical side of the planning profession. I have consistently embraced opportunities to put my expertise in the field of urban planning into practice. My current research focus can be grouped in the following three topics:

Technologies and Cities

New technologies alter the physical possibilities of human settlement, as well as the economic, cultural, and political relations of everyday urban life. A great deal of my current research has focused on how new information technologies (IT)–the Internet, personal computers, personal digital assistants, and wireless communications–are transforming the world as we know it and how that transformation really takes shape in human settlements, particularly in urban areas.

Transportation, Land Use and Infrastructure Protection

Early in my career as an urban planner and a regional scientist, I became convinced that the analysis of transportation issues cannot be

separated from other urban and regional activities. The majority of my research on transportation has to do with searching for fundamental causes and solutions for transportation problems stemming from land use, socio-economic factors, and the modern lifestyles of urban residents.

International Planning

According to the United Nations, the world will need to build new cities and/or expand existing cities to accommodate about 1.6 billion additional urban residents by 2030. This trend is the result of many complex socio-economic and political factors, and poses unprecedented challenges to the functioning of cities and the quality of life for urban dwellers. The resources needed for accommodating new urban dwellers will be enormous. Can we plan sustainable future cities? With this question in mind, I have collaborated with scholars from various parts of the world in implementing research projects investigating population and urban growth and change in Saudi Arabia, Indonesia, China, Korea, Sweden, Kenya, Poland and the USA.

The basic question I address in my research has been "What would be the major economic, social, and environmental implications, particularly in an urban context, in the event of specific changes in technology and lifestyle?" I am continually searching for improved frameworks to apply to the formulation of scenarios regarding sustainable urban and regional development. At the same time, it is my view that the potential to increase the utility of living in urban areas while simultaneously facilitating environmental sustainability depends not only on planning, economic instruments, and new technologies, but also upon education and the cooperation of citizens through changes in their lifestyles.

5 Regional specialization and the drinks industry (2): The essence of Greek spirit: ouzo alchemy and the joy of life in an island economy

Dimitris Kavroudakis (University of the Aegean, Greece) and Dimitris Ballas (University of Sheffield, UK)

"When you have no money, come and drink. And when you have come and pay; But when you have and don't pay, don't come and drink."

(Michalis Viglatzis's coffee shop Aghiasos, Lesvos; quote taken from Greek islands, 2011)

Ouzo is the quintessential Greek drink and a symbol of Greek culture and attitude towards life. Its status as the national drink of Greece is validated by the European Union, which recognises ouzo as a trademark label with a protected designation of origin. The story of ouzo – even the origins of its name – is steeped in legend; a tradition of anise alcoholic beverages that dates back to Babylonia and ancient Mediterranean history, creative medieval monks in Mount Athos, the appreciative remarks of an Ottoman consulate physician, the return of the Greek diaspora to a liberated country in the 19th century and secret family recipes are all parts of the puzzle (Vekris, 2008; Tonutti and Liddle, 2010; Tsachaki et al., 2010). The production of ouzo is not just the mixture of anise, water and alcohol; it involves the use of aromatic plants and herbs such as coriander, cloves, angelica root, licorice, mint, wintergreen, fennel, hazelnut and even cinnamon and lime blossom (greekproducts.com, 2011).

Fig. 1. Painting from café Ermis in Mytilini, Lesvos (source: Barrett, 1998a)

Ouzo has earned its place as a food accompaniment, much like beer and wine, and it is the perfect drink to enhance the flavours of many Greek dishes, particularly seafood and salted or smoked delicacies. Its alcohol content ranges from about 37% to 46% – so it is not as strong as it is perceived – and it is clear in colour. The ouzo effect, contrary to common belief that the drinker blanks out and then thinks he has been abducted by aliens (see Matt Barrett's experience, which did not put him off a lifelong appreciation of good ouzo, Barrett, 1998c), is that it turns a cloudy white when water or ice is added. The reason is that anethole, one of the ingredients of anise, is not soluble in water and therefore chemically separates from anise creating an emulsion whose droplets scatter the light (Carteau et al., 2008).

According to some sources, an estimated 30 million bottles are consumed in Greece every year and an additional 10 million are exported (KETA-BA, 2009). Naturally, ouzo is a very important product in a number of
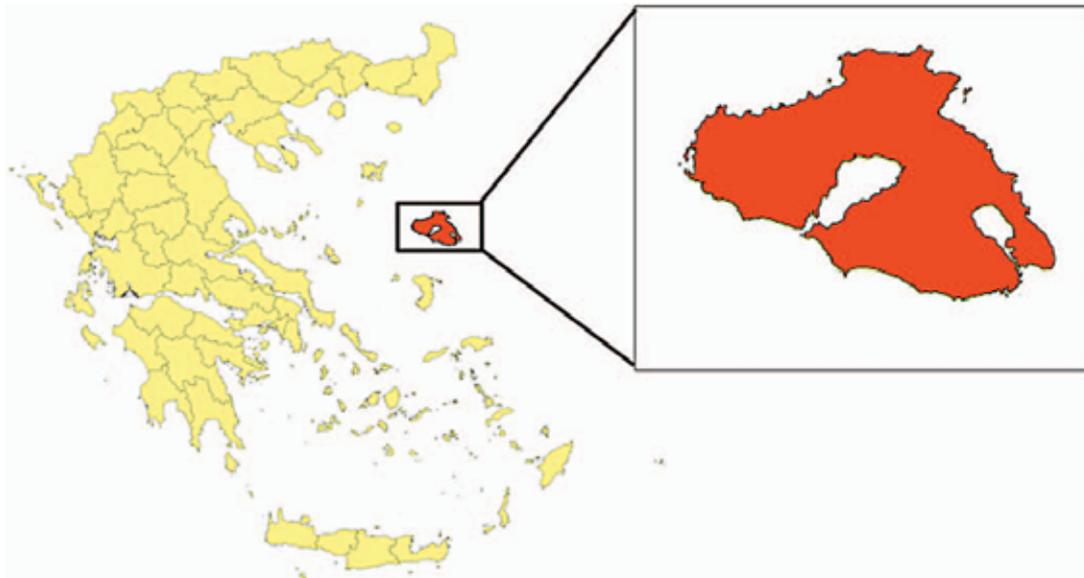
Fig. 2. The location of Lesvos Island

local economies across Greece (for an on-line map see Vekris, 2008) and it is one of the key main products of the Northern Aegean island region, together with fish and sea food, mastiha, wine, olive oil and cheese (Kalogridis, 2007; Vakoufaris, et al., 2007). It is especially important for the island of Lesvos (see Figure 2) which produces most of the total ouzo production in Greece; it is therefore not surprising that the island is often described as the homeland of ouzo and as the ouzo capital of the world, both in terms of the quantity produced as well as quality (KETA-BA, 2009; Taylor, 2004; Barrett, 1998a).

This article provides a brief overview of the local economy of Lesvos, the ouzo capital of the world, and also maps the industry of ouzo on the island.

The island economy of Lesvos

Lesvos is the third largest island in the Aegean Sea (after Crete and Evia) with a total area of 1,632 square kilometres and a population of about 90,000. Around 40% live in the capital Mytilini (Athanasiadou, 2009; Kizos and Koulouri, 2006). Mytilini, which is built amphitheatrically upon seven hills and is

renowned for its rich and diverse architectural and cultural heritage, is a regional administrative and economic centre and also the home of the main campus of the University of the Aegean.

Fig. 3. Mytilini, the capital of the island (source: http://el.wikipedia.org/)

Agriculture has traditionally been the key sector in the island's economy with olive cultivation being particularly important since the 19th century. But, over the recent decades there has been a considerable reduction in the number of farms (Kizos et al., 2009). It has often been argued that the distance from the

Greek mainland had been a major obstacle in its economic development, contributing to the island lagging behind the Greek average in the period between 1950–1970 (Chamber of Lesvos, 2011). Nevertheless, this has been changing since the 1970s, due to the modernisation of ferryboat and air transport connections and the massive extension and enhancement of such transport links between Mytilini and mainland Greece (especially Athens and Thessaloniki). In addition, the economy of the island has been diversifying with the importance of the service sector (and especially tourism) growing massively. It is interesting to note that in a relatively recent comparative study between British and Greek islands, Lesvos was placed in a cluster of islands labelled as "accessible, successful and diversified" (Armstrong et al., 2006).

The island of Lesvos has become a very popular tourism destination. There is an estimated number of over 10,000 tourists arriving by direct charter flights every year over the last 5 years from across Europe (Manavis, 2011). This is in addition to domestic tourism and international tourists arriving by scheduled ferry or air via mainland Greece. Nevertheless, the island is described in a popular travel website as "virtually unaffected by the mass tourism that has turned other islands into amusement parks" and as "the perfect place to visit for people who want to experience the real Greece" (Barrett, 1998b).

It is also noteworthy that, despite the decline in the number of farms mentioned above, agriculture remains a very important sector of the economy, in terms of the jobs and incomes it provides, especially in the more rural areas of the island (Kizos et al., 2009). As Kizos et al. (2009: 201) point out, the 2001 agricultural census "recorded 14,375 olive farms (95% of the total

farms recorded on the island) covering 45% (38,951.8 ha) of the total Utilized Agricultural Area (UAA) and roughly 30% of the total area of the island, and 3,723 farms with grazing lands (23% of total farms) covering 49.5% of the UAA, grazed by roughly 300,000 sheep and 44,000 goats (along with 7,000 cows)". It is also interesting to note that estimates of the number of olive trees in the island suggest that there are at least 8 million olive trees, whereas some sources put this figure as high as 11 million (Kizos et al., 2009).

The ouzo industry in Lesvos

As seen in the previous section, the economy of Lesvos has been diversifying over the past decades, with services and tourism in particular growing in significance, but with agriculture also remaining very important. In this section we explore the impact and the geography of the ouzo industry on the island.

As noted in the introduction, Lesvos is often described as the ouzo capital of the world. It has long been argued that this may be due, to a great extent, to the suitable climate of the island which is ideal for the production of anise, a key ingredient of ouzo (Lesvos Chamber, 2011). In addition to the production of high quality anise, the island boasts high quality grapes and aromatic plants, which may have contributed to the development of a work ethic and long tradition of constantly thriving to improve the quality of the ouzo produced on the island (Lesvos Chamber, 2011). Today there are a considerable number of ouzo producers in Lesvos Island continuing a tradition dating back to the middle of the 19th century, when ouzo began to be traded extensively in the Mediterranean. We have collected information on these producers and created the map shown in Figure 4. It is interesting to note that one of these producers has recently been ranked as one of the largest 10
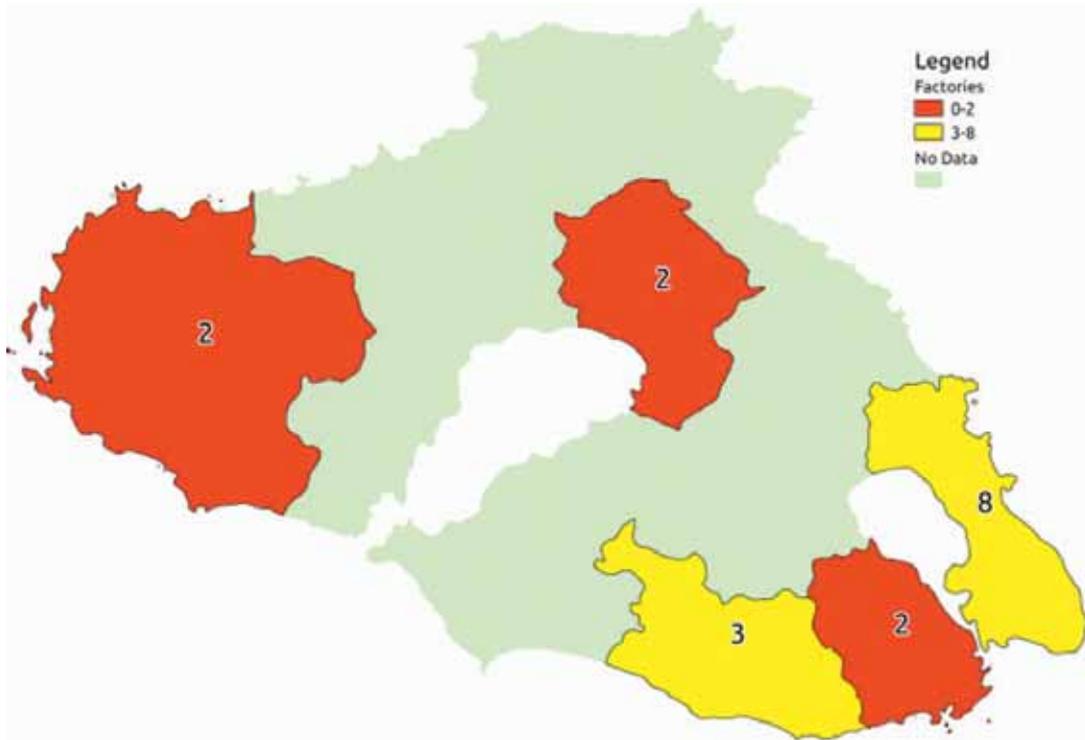
Fig. 4. Ouzo producers in Lesvos

Greek businesses (Lesvos Chamber, 2011).

The Barbayiannis Museum of Ouzo in Lesvos (2011) is a testament to the prominence of ouzo in the culture and economy of the island and their passion for the production of the "finest Greek liquor beverage" as they put it. This museum is located in the town of Plomari and is run by the Ouzo Barbayiannis Liquor Distillery (which produces 400 to 500 thousand litres of ouzo annually, personal communication).

Not surprisingly, ouzo is not only an important export product of Lesvos, but it also hugely popular with locals. It can also be argued that the quality of the ouzo, as well as the associated lifestyle and type of cafes and tavernas may be one of the key tourist attractions of the island. Figure 5 shows the estimated spatial distribution of establishments serving ouzo together with various meze dishes (Greek snack dishes) and other food.

Conclusions

This article has given a brief overview of the ouzo industry with a focus on a Greek island for which the production of ouzo is particularly important. It can be argued that there is huge potential for this industry to grow further and to become an even more important source of revenue for the island of Lesvos, especially with better marketing of the product in Greece and across the world. It has long been argued that the Greek alcoholic and soft drinks industries may be lagging behind in branding and marketing compared to Western multinational companies (e.g. see Theodorakioglou and Wright, 1998) and therefore there may be a lot of room for improvement. In addition to the potential for increased demand for this product in Greece and worldwide, there are very interesting cultural, lifestyle and local food industry dimensions that are worth exploring when looking at the future of the ouzo industry.
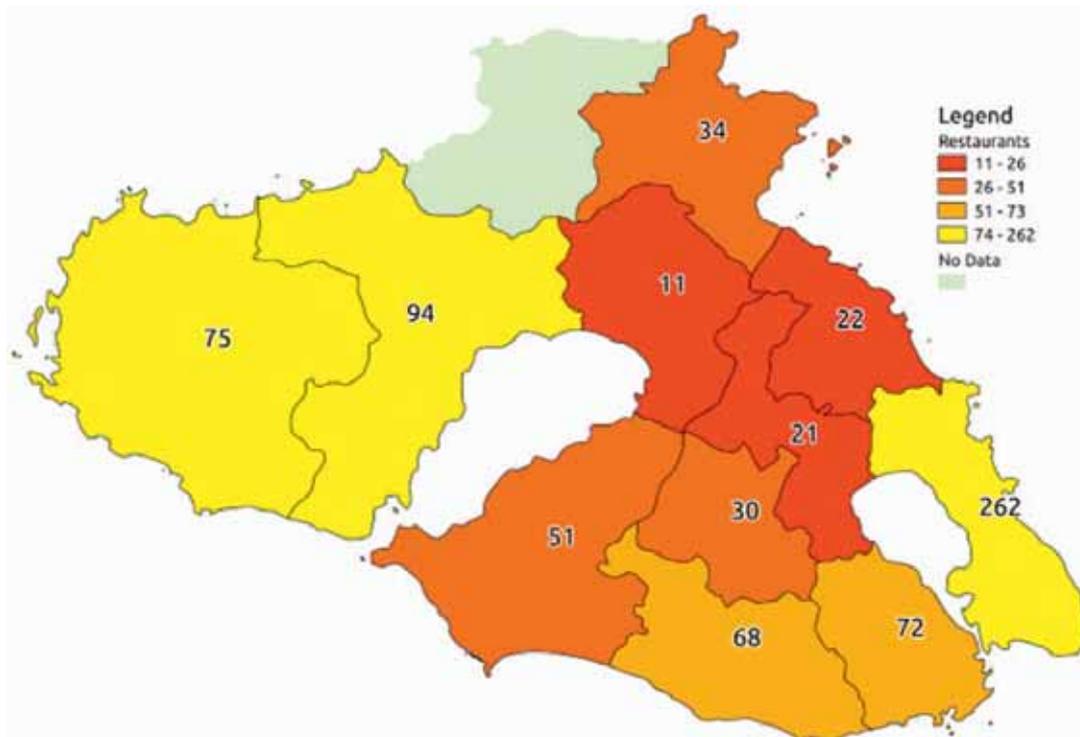
Fig. 5. Spatial distribution of restaurants and cafes serving ouzo in Lesvos

Gazing at the infinite blue of the Aegean Sea enhances the experience but you can appreciate ouzo anywhere. Just sip slowly, enjoy your food and share with friends. Geia mas!

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6 RSAI prize winner

David Boyce (left) presents the latest fellow award to Gordon Mulligan, Professor Emeretus, University of Arizona. Congratulations Gordon!

7 Centres of Regional Science: The Regional Quantitative Analysis (AQR-IREA), from the University of Barcelona

The Regional Quantitative Analysis Centre (AQR-IREA), at the University of Barcelona, is located in the Department of Econometrics, Statistics and Spanish Economy at the University of Barcelona (Spain). The main research activity of

the group is focused in Applied Economics, with a special emphasis on the analysis of urban and regional issues.

The Regional Quantitative Analysis Centre (AQR), is directed by Manuel Artís, and has two coordinators, Enrique López-Bazo for research topics, and Jordi Suriñach for knowledge transfer issues. Jordi Suriñach is also president of the Catalan Association of Regional Science and director of the Research Institute of Applied Economics (IREA), a centre integrated with AQR. The group has more than forty Spanish and international researchers and twenty years of experience, and has been recognized by the Generalitat de Catalunya (the regional government) as a group of quality and excellence in economic research.

In terms of publications, according to RePEc, AQR-IREA is in the top 5% in Spain and top 10% in Europe of all research institutions among all fields of Economics, and 7 of their researchers are among the top 25% economists in Spain. According to Florax and Plane (PRS, 2004) Barcelona was first ranked in Regional Science during the 1995–2004 decade. AQR-IREA members were behind that position. Together with the board of directors, it is worth also mentioning other researchers integrated in AQR-IREA such as Josep Lluís Carrión-i-Silvestre, Rosina Moreno, Raul Ramos, Peter Claeys and Vicente Royuela. This academic excellence has been achieved working in a wide list of topics. We can mention those of economic growth and convergence, externalities, human capital, labour market, knowledge economy, firm location, firm demography and survival, labour migration, macroeconomic forecast, conjuncture analysis, and development of synthetic and strategic indicators. In 2009 the group organised the III world Spatial Econometrics and in 2011 Jordi Suriñach and Vicente

Royuela were the President and Coordinator respectively of the Local Organizing Committee of the 51st ERSA Conference in Barcelona. In addition, the group organises annually a Workshop on Regional and Urban Economics. The 2011 edition is focused on Inequality and Regional Growth and Cohesion, and hosts keynote speakers José Enrique Garcilazo and Andrés Rodriguez-Pose. Finally, every term two seminar-series for senior and junior researchers is developed. In 2010 and 2011 a list of top academics has presented in Barcelona, such as Mark Partridge, Giuseppe Arbia, Alessandra Faggian, Frank Van Oort and M. Hashem Pesaran among others.

The AQR-IREA research group

In addition, AQR-IREA works with public institutions and private enterprises developing projects within the scope of its research interest. It leads the SEARCH project within the 7th Framework Programme, titled "The Sharing KnowledgE Assets: InteRregionally Cohesive NeigHborhoods" (FP7-SSH-2010-2.2-1266834), with a total budget over 2.5 million €. This project aims to improve the understanding of institutional framework conditions of the ENP countries, their economic interactions with the EU in terms of people, capital, trade, knowledge, and innovation, in order to improve future definition and implementation of European

Neighbouring Policies taking into account that "one size fits all" policy recommendations will not be appropriate due to the bilateral nature of the EU-ENP countries agreements.

Furthermore, AQR-IREA participates as a partner in the ESPON 2013 programme, in the project titled KIT, "Knowledge, Innovation and Territory". AQR tasks are devoted to the analysis of the sectoral dimension of innovation at the national level, the analysis of the knowledge spread all over the economy (using data on inventors' mobility) and the impact the inventors' mobility exerts on the regional innovation capacity. AQR-IREA has been involved in the 6th and 7th Framework Programmes for years. The group leaded the "Intangible Assets and Regional Economic Growth" project (www.iareg.org) and is an active member of the "European Forecasting Network" (www.efn.eui.eu). Also, AQR-IREA leaded the ESF COST Action titled "Small and Medium Enterprises, Economic Development and Regional Convergence in Europe". AQR-IREA has participated in 8 projects and Reports for the DG ECFIN in the last 10 years and advises the European Parliament on Economic and Monetary issues. Finally the research group is involved in a number of research projects granted by the Spanish Ministry of Science and Education.

Between 2004 and 2011, 9 PhD dissertations have been defended under the supervision of researchers within the group. These dissertations have been elaborated in the context of the PhD Programme in Economics of the University of Barcelona, which has received a Quality mention from the Spanish Ministry of Education. Usually a number of research fellowships are made available to graduates wishing to work with AQR-IREA research Group as they develop their doctoral studies at the University of Barcelona. Those Ph. D. students have benefited from the

international contacts of AQR-IREA derived from its participation in the different networks where we are involved, which has allowed them to join high standard institutions all over Europe. AQR-IREA also hosts visiting researchers for short-term visits and even for long-term stays through, for instance, the Marie Curie Actions of the European Union, or other mobility programs financed by the Catalan and Spanish Governments. In addition, the group recruits widely in the job market from a range of international groups.

For more information, please contact aqr@ub.edu or visit the AQR-IREA website at http://www.pcb.ub.edu/aqr/en/. You can also follow the research group on Facebook (http://www.facebook.com/Regional.Quantitative.Analysis.Group) and Academia (http://barcelona.academia.edu/RegionalQuantitativeAnalysisResearchGroup).

8 Regional specialization and the drinks industry (3): Spatial Distribution and Agglomeration Effects in the Japanese Food and Drinks Industry

Suminori Tokunaga, University of Tsukuba, Graduate School of Life and Environmental Sciences

From the agglomeration index (γ_{EG}) of Ellison and Glaeser (1997), we found that there are 20 Japanese food sub-industries, which are highly agglomerated: see Figure 1. Since the

location of the entire food industry is determined by the availability of agricultural resources, we observe that agar-agar, wine and tea are concentrated in the areas where firms can have easy access to raw materials and natural advantage, and 'sugar' is located close to the harbour. These industries are strongly agglomerated compared to other manufacturers. The pattern of agglomeration from 1985 to 2000 shows that wine displays decreasing agglomeration after 1985. But, surprisingly, many highly-agglomerated sub-industries retained their spatial distribution in spite of a general trend towards dispersal. In other words, agglomeration remains important in the Japanese food industry. This agglomeration index and shipment value (Y), on the whole, flattened from 1985 to 2000, regardless of high and low contours. When we observe these relationships by sub-industries, agar-agar has an increasing trend towards agglomeration from 1985 to 1995, but a decreasing trend in 2000.

For sugar, canned seafood and seaweed, and glucose, starch syrup and high-fructose corn syrup, there has been a downward trend. Miso, and soy sauce (shoyu), and manufactured ice seem to show stable trends over the last 20 years. In the wine industry, the plants concentrated in Yamanashi Prefecture have seen decreased agglomeration from 1985 to 2000, but an increase in shipment. In Japan, demand for wine has been increasing rapidly on the background of a wine boom and hence the development of some new regional sources of wine, such as the Hokkaido and Nagano Prefecture.
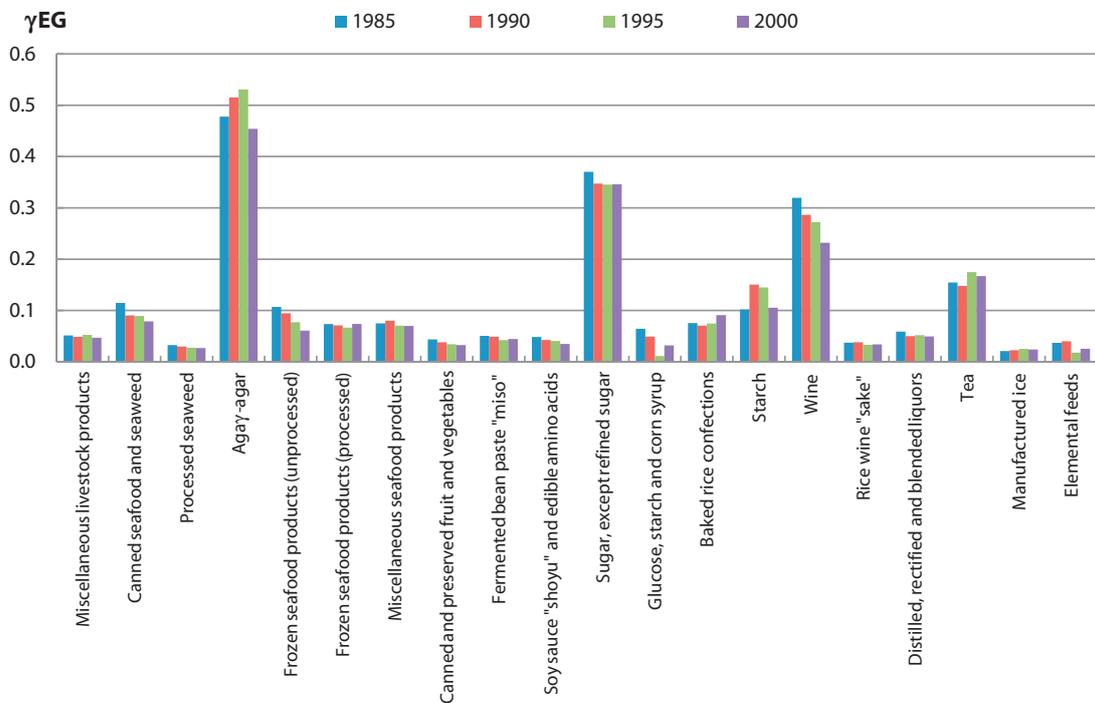

Fig. 1. Agglomeration index for 20 Japanese food sub-industries (1985–2000).
Note: agglomeration index of Ellison and Glaeser(1997), Source: Akune and Tokunaga (2005).

Based on these findings, we estimated a flexible translog production function using a 4-digit sub-classification from Japanese food industry panel data (1985–2000). The translog production function is:

$$\ln Y = \alpha_0 + \alpha_k \ln K + \alpha_l \ln L +$$
$$\alpha_m \ln M + \frac{1}{2}\beta_{kk}(\ln K)^2 + \frac{1}{2}\beta_{ll}(\ln L)^2$$
$$+ \frac{1}{2}\beta_{mm}(\ln M)^2 + \beta_{kl}\ln K \ln L +$$
$$\beta_{km} \ln K \ln M + \beta_{lm} \ln L \ln M +$$
$$\delta_a \ln A + \frac{1}{2}\delta_{aa}(\ln A)^2 + \gamma_{ka} \ln K$$
$$\ln A + \gamma_{la} \ln L \ln A + \gamma_{ma} \ln M \ln A$$

The cost share equation is:

$$S_i = \frac{\alpha_i + \sum_j \beta_{ij} \ln X_j + \gamma_{iA}A}{\sum_i \alpha_i + \sum_i \sum_j \beta_{ij} \ln X_j + \sum_i \gamma_{iA}A}$$

where Y, K, L, E, M, A are output, capital, labor, materials, agglomeration respectively. In the cost share equation, subscript i means input, and S_i means cost share of the i_{th} input. X is the input vector, that is, capital, labor, and materials. α_i, β_{ij}, δ_a, δ_{aa}, γ_{ij} are the parameters to be estimated. For estimation, we try to test the following cases: (1) impose no restriction, (2) homotheticity is imposed ($\sum_j \beta_{ij} = 0$), (3) homogeneity is imposed

$$\left(\sum_i \alpha_i = \theta, \sum_j \beta_{ij} = 0, \sum_i \gamma_{iT} = 0 \right).$$

We carry out the estimation using the iterative nonlinear seemingly unrelated regression method (SUR), as suggested by Zellner (1962) taking serial correlation into account.

Table 1 shows the three different model specification estimation results. Monotonicity and convexity are satisfied for each estimated function. According to the results of the Wald test, the nonhomotheticity model is the most favorable. The results of the nonhomotheticity model show that almost all estimated parameters are significant at the 1% or 5% level, except for β_{KL}. Furthermore, the sign conditions of the parameters are theoretically appropriate.

Since the individual parameters are not readily interpretable, we have calculated the output elasticities of input, return to scale, and the agglomeration effect on production. These results are shown Table 2. First, we observe that output elasticities of raw materials are much larger than the other two inputs and the elasticity of capital is low. Second, scale economy is over 1 in all cases except in the linear homogeneity model and significant at the 1% level. Third, the elasticity of agglomeration effects on production is estimated at 0.023, again significant at the 1% level. We also found that agglomeration in the Japanese food industry has a positive effect on production using the 4-digit sub-classification data. That is to say, our influential findings are that in the Japanese food industry, with the existence of scale economies, productivity increases around 2% when plants agglomerate.

In other words, a positive circulation linkage is generated through increasing returns to scale arising from plants included in the same sub-industry choosing their location close to another in one particular area, and maintaining plant agglomeration generates more spin off production. Previous research about productivity in the Japanese food industry tends to be focused on technical structure and changes, but we suggest there is a need to include the concept of firms' location behavior into the productivity analysis.

Table 1. Estimation of a flexible translog production function

	Nonhomotheticity				Homotheticity				Homogeneity		
	Estimate	S.E.	t-stat.		Estimate	S.E.	t-stat.		Estimate	S.E.	t-stat.
α_0	−0.673	0.980	−0.686	α_0	−1.911	0.647	−2.956***	α_0	−1.902	0.636	−2.989***
α_K	0.077	0.048	1.591*	α_K	0.072	0.046	1.568*	α_K	0.105	0.045	2.332***
α_L	0.170	0.064	2.658***	α_L	0.246	0.049	4.990***	α_L	0.265	0.051	5.216***
α_M	0.791	0.097	8.159***	α_M	0.933	0.043	21.805***	α_M	0.935	0.043	21.810***
β_{KK}	0.069	0.007	10.544***	β_{KK}	0.075	0.006	12.889***	β_{KK}	0.076	0.006	13.409***
β_{LL}	0.103	0.005	19.296***	β_{LL}	0.100	0.005	18.702***	β_{LL}	0.099	0.006	17.424***
β_{MM}	0.210	0.007	29.485***	β_{MM}	0.201	0.006	35.100***	β_{MM}	0.199	0.006	34.809***
β_{KL}	0.004	0.005	0.939	β_{KL}	0.003	0.004	0.634	β_{KL}	0.001	0.004	0.155
β_{KM}	−0.068	0.005	−14.035***	β_{KM}	−0.072	0.004	−16.217***	β_{KM}	−0.074	0.004	−16.927***
β_{LM}	−0.123	0.004	−28.869***	β_{LM}	−0.123	0.004	−33.653***	β_{LM}	−0.123	0.004	−33.052***
δ_A	−0.190	0.064	−2.953***	δ_A	−0.121	0.058	−2.074**	δ_A	0.076	0.021	3.546***
δ_{AA}	0.020	0.007	2.953***	δ_{AA}	0.020	0.007	2.819***	δ_{AA}	0.011	0.007	1.604*
γ_{KA}	0.010	0.003	4.021***	γ_{KA}	0.012	0.002	4.983***	γ_{KA}	0.009	0.002	3.928***
γ_{LA}	−0.002	0.003	−0.937	γ_{LA}	−0.003	0.003	−1.191	γ_{LA}	−0.008	0.002	−3.205***
γ_{MA}	0.016	0.004	4.111***	γ_{MA}	0.009	0.004	2.671***	γ_{MA}	−0.001	0.002	−0.566
Sample	216			Sample	216			Sample	216		
Adj.R^2	0.973			Adj.R^2	0.974			Adj.R^2	0.973		

Note: * significant at 10% level, ** at 5% level, and *** at 1% level.

Source: Kageyama, Tokunaga, and Akune (2007).

Table 2. Output elasticities, scale economies, and agglomeration effects (The case of γ_{EG})

		Estimate	S.E.	t-stat.
Output elasticities		Nonhomotheticity		
	Capital	0.136	0.003	40.2***
	Labor	0.255	0.007	36.9***
	Materials	0.634	0.010	61.7***
Returns to scale		1.025	0.003	7.8***
Agglomeration effects		0.023	0.003	8.4***
Output elasticities		Homotheticity		
	Capital	0.134	0.004	36.2***
	Labor	0.255	0.007	36.8***
	Materials	0.637	0.010	66.2***
Returns to scale		1.026	0.003	8.4***
Agglomeration effects		0.027	0.003	10.7***
Output elasticities		Homogeneity		
	Capital	0.133	0.004	36.3***
	Labor	0.254	0.007	35.7***
	Materials	0.635	0.009	68.4***
Returns to scale		1.022	0.002	11.7***
Agglomeration effects		0.024	0.002	16.2***

Note: * significant at 10% level, ** at 5% level, and *** at 1% level. *Source*: Kageyama, Tokunaga, and Akune (2007).

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9 Future Events

9.1 The 9th World Conference

Daniela L. Constantin, Academy of Economic Studies of Bucharest

The Regional Science Association International jointly with the Romanian Regional Science Association and the Faculty of Economics and Business Administration of the West University of Timisoara is organizing the 9th World Congress of the RSAI on May 9–12, 2012 in Timisoara, Romania.

The main topic of the congress is "Changing Spatial Patterns in a

Globalizing World", which is expected to attract regional scientists from all over the world interested in debates on themes such as: Emerging challenges for regional development; Vision and management of sustainable cities; Rural and local development; Accessibility, infrastructure and regional economic growth; Social capital and regional development; Agglomeration, clusters, congestion and policy; Learning from failures in European regional policy; Crisis of public finances, Governance and regional development; Globalization and regional competitiveness; Cross-border cooperation and development; Migration, cultural networks and regional development; Social segregation poverty and social policy; Spatial issues of the labor market; Climate change and sustainable regional development; Entrepreneurship, networks and innovation; Innovation, knowledge economy and regional development; Geographical information systems and spatial analysis; Spatial econometrics;

New frontiers in regional science: theory and methodology; Infrastructure, transports and communications; Land use, real estate and housing markets; Location studies; Tourism, cultural industries and regional development; Urban governance and cities regeneration; Territorial marketing. These themes will be the subject of both ordinary and special sessions.

The congress venue is the Regional Business Centre in Timisoara, while the opening ceremony will be hosted by the Timisoara Opera House; one of the city's architectural landmarks.

Timisoara is a very attractive and prosperous city located in the Western part of Romania and an outstanding example of inter-ethnical and cross-cultural relationships between the Romanians, Hungarians, Germans, Serbs, Ukrainian, Russian, Turks, etc. who are living together in this area. With its marvelous baroque architecture, Timisoara is also known as "the Rose City" (May is the best month to enjoy it) and it is surrounded by lots of vineyards and exquisite natural parks. It is also internationally famous since it is this city that launched the December 1989 Romanian revolution. Timisoara has very good international transport connections by plane, car and train.

Important deadline for the potential participants in the 2012 World Congress of the RSAI are:

• Abstract submission – November 21
• Notification of abstract acceptance – January 15
• Payment of the reduced registration fee January 31;
• Paper submission – February 28.

More info can be found on the congress webpage, www.rsai2012.uvt.ro

We are looking forward to welcoming you to Timisoara, Romania, in May 2012!

9.2 WRSA Annual Meeting in Hawaii

The Western Regional Science Association will hold its 51st Annual Meeting in Kauai, Hawaii, February 8–11, 2012. Plan now to be part of what is sure to be a productive, enjoyable, and very international conference. Along with a truly excellent location, the WRSA meeting will feature, as usual, its signature 45-minute paper slots, which include time for assigned discussant remarks and open discussion. WRSA meetings are a great venue for feedback on research!

WRSA accepts submissions for the meeting program based on complete papers, not abstracts. Papers may be in draft form at the time of submission so long as final versions are submitted by the end of the year. To submit a paper, simply email the file to wrsa@brown.edu. **The extended deadline for paper submissions is November 14, 2011.**

Further meeting information is available on the WRSA website (www.wrsa.info). If you have questions about the meeting, feel free to email Rachel Franklin (rachel_franklin@brown.edu).

The WRSA's unofficial motto is "The way academic life should be." Come find out what keeps WRSA meeting attendees coming back year after year!

10 Next issue

The theme of the next issue will be 'Disasters and Regional Science'. Please send any contributions directly to Eveline van Leeuwen e.s.van.leeuwen@vu.nl or Graham Clarke G.P.Clarke@Leeds.ac.uk.