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# Working Paper

How similar to south-eastern Europe  
were the islands of Cyprus and Malta in  
terms of agricultural output and credit?  
Evidence during the interwar period

Alexander Apostolides

SEEMHN

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BANK OF GREECE  
Economic Research Department – Special Studies Division  
21, E. Venizelos Avenue  
GR-102 50 Athens  
Tel: +30210-320 3610  
Fax: +30210-320 2432

[www.bankofgreece.gr](http://www.bankofgreece.gr)

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ISSN 1109-6691

## Editorial

The South-Eastern European Monetary History Network (SEEMHN) is a community of financial historians, economists and statisticians, established in April 2006 at the initiation of the Bulgarian National Bank and the Bank of Greece. Its objective is to spread knowledge on the economic history of the region in the context of European experience with a specific focus on financial, monetary and banking history. The First and the Second Annual Conferences were held in Sofia (BNB) in 2006 and in Vienna (OeNB) in 2007. Additionally, the SEEMHN Data Collection Task Force aims at establishing a historical data base with 19<sup>th</sup> and 20<sup>th</sup> century financial and monetary data for countries in the region. A set of data has already been published as an annex to the 2007 conference proceedings, released by the OeNB (2008, Workshops, no 13).

On 13-14 March 2008, the Third Annual Conference was held in Athens, hosted by the Bank of Greece. The conference was dedicated to *Banking and Finance in South-Eastern Europe: Lessons of Historical Experience*. It was attended by representatives of the Albanian, Austrian, Belgian, Bulgarian, German, Greek, Romanian, Russian, Serbian and Turkish central banks, as well as participants from a number of universities and research institutions. Professor Michael Bordo delivered the key note speech on *Growing up to Financial Stability*. The participants presented, reviewed and assessed the experience of SE Europe with financial development, banking and central banking from a comparative and historical perspective.

The 4<sup>th</sup> Annual SEEMHN Conference will be hosted by the National Serbian Bank on 27<sup>th</sup> March 2009 in Belgrade. The topic of the Conference will be *Economic and Financial Stability in SE Europe in a Historical and Comparative Perspective*.

The papers presented at the 2008 SEEMHN Conference are being made available to a wider audience in the Working Paper Series of the Bank of Greece. Here we present the seventh of these papers, by Alexander Apostolides.

July, 2008

Sophia Lazaretou  
*SEEMHN Coordinator*  
*Member of the Scientific and Organizing Committee*



# **How Similar to South-Eastern Europe were the Islands of Cyprus and Malta in terms of Agricultural Output and Credit? Evidence during the Interwar Period**

Alexander Apostolides  
London School of Economics and Political Science

## **ABSTRACT**

The islands of Cyprus and Malta have been considered as similar economically to other South-Eastern European states, despite the lack of historical evidence to prove it. The paper uses recently compiled primary sector output estimates for the interwar period (1921 – 1938) to evaluate that the economic structure of the islands was different from each other, as well as from other South-Eastern European states. The agricultural sector of the islands failed to keep up with the other states due to growth constraints. Due to the lack of a healthy system, rural credit was particularly problematic as it prevented a shift to products for which the islands held a comparative advantage.

*Keywords:* Cyprus; Malta; Depression; Rural credit; Historical national accounts; South-eastern Europe.

*JEL classification:* N14; N34; N54; O13; E01; E23.

*Acknowledgements:* An earlier version of the paper was presented in the Thesis Workshop of Economic History at the London School of Economics in February 2006 and the author would like to thank the participants for their useful comments. The author also acknowledges and thanks for comments and suggestions made by Şevket Pamuk, Max-Stephan Schulze and Tirthankar Roy.

## **Correspondence:**

Alexander Apostolides  
London School of Economics and Political Science  
Economic History Department  
Houghton Street, London, WC2A 2AE, UK  
*email:* [a.apostolides@lse.ac.uk](mailto:a.apostolides@lse.ac.uk) and [www.econcy.ma.blogspot.co](http://www.econcy.ma.blogspot.co)



## 1. Introduction

The economic history of Cyprus and Malta has lagged behind the rest of Europe, despite the resurgence of economic history within the geographical periphery of Europe, especially in the field of historical national accounts creation<sup>1</sup>. This paper stems from an ongoing attempt to estimate the GDP of Cyprus and Malta for the interwar period, and presents the value added estimates of the primary sector. The performance of Malta and Cyprus needs to be placed within a context that allows an economic historian to compare and contrast the islands' experience to the wider world. Thus the results are compared to the interwar experience of South- Eastern European states (SEES).

The historiography of South-Eastern Europe as expressed by Ivanov and Tooze, “offers no consistent narrative about economic development ... prior to 1945”<sup>2</sup>. The area was traditionally viewed as one of particularly poor economic growth during the interwar period. The economic conditions were not considered conducive to accelerated economic growth as SEES were suffering a backlog of problems that retarded their economic progress, despite their efforts to modernise<sup>3</sup>.

The revival in historical national accounts in South-Eastern Europe has led to a more positive approach to the region's economic outlook. Ivanov, Pamuk and Kostelenos *et al* argue that SEES did experience extensive growth which was checked by rapid population growth: for Bulgaria, Greece and Turkey the 1930s as a whole was a positive period in terms of GNP/GDP per capita<sup>4</sup>. The income gap between the wealthier Western

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1 Recent work includes: Martin Ivanov, “Long-Run Bulgarian Economic Development 1892 – 1945: GNP Estimates, Methods and Data Sources” in Roumen Avramov and Sevkert Pamuk (eds.) *Monetary and Fiscal Policies of South East Europe: Conference Proceedings of the South – East Europe Monetary History Network 13 - 14 April 2006* (Sofia: Bulgarian National Bank, 2006) pp.187 – 196; Γεώργιος Κωστελένος, *et al*, *Ακαθάριστο Εγχώριο Προϊόν 1830 – 1939* (KEPE & IAETE: Αθήνα, 2007), Sevkert Pamuk “Estimating Economic Growth in the Middle East since 1820” *The Journal of Economic History*, Vol. 66, (2006), pp. 809-828.

2 Martin Ivanov and Adam Tooze “Convergence or Decline on Europe's Southeastern Periphery? Agriculture, Population and GNP in Bulgaria 1892 – 1945” *Journal of Economic History* Vol.67, No.3, (2007) pp.672 – 704, p.772

3 Nicolas Spulber, *The State and Economic Development in Eastern Europe* (New York: Random House, 1966) p.75

4 Martin Ivanov “Bulgarian National Income 1892 - 1924: 60 Years Later of a Quarter of a Century Earlier” (forthcoming) Table AO; Ivanov and Tooze (2007) p.884; Sevkert Pamuk, “Intervention during the Great Depression - Another Look at Turkish Experience” Ch.12 in Pamuk and Williamson, *The*

Europe and SEES did grow, but not by much, as SEES managed to provide a faster rate of growth to match their rapid population expansion.

The author is estimating the GDP per capita of Cyprus and Malta for the period 1921 – 1938; the limited time period is a conscious decision taken to dispel the conviction that not enough data exists for such project to be feasible. The estimates were derived using the production approach following Eurostat practices and nomenclature; however, a rigid adherence to ESA 1995 rules was not always feasible<sup>5</sup>. During the interwar period the islands were British colonies, and thus were obliged to collect a substantial amount of information in order to complete the annual statistical blue books. Where information was sparse, archival research in departmental files uncovered a great wealth of information which was compiled to create historical national accounts. There is evidence to suggest that colonial statistics for Malta and Cyprus are generally reliable<sup>6</sup>. The archival research undertaken was not exhaustive: a greater array of sources can be utilised if further research is undertaken.

The Cypriot agricultural output estimates are based on 85 products in 19 (4-digit NACE Rev.2) classes and include forestry and fishing. The large number of products enumerated is necessary as agricultural production in Cyprus was very diverse; thus estimates of gross output need to be as extensive as possible<sup>7</sup>. Malta's agricultural and fishing output estimates are constituted by 42 products in 14 classes. Cypriot mining and quarrying consists of 18 products in five classes and Malta's quarrying consists of five products in three classes. Gross output is calculated in 1938 producer prices; work is currently being undertaken to estimate the sector in current prices. Intermediate consumption is calculated for 1938 and the value added share is assumed constant for the

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*Mediterranean Response to Globalisation* (London and New York: Routledge, 2000), p. 321; Table 12.1; Κωστέλενος, *et al*, *Ακαθάριστο Εγχώριο Προϊόν 1830 – 1939* (2007), CD Disk, Table 8-Ib

5 Riitta Hjerppe: "Understanding Economic Development Through Historical National Accounts" pp.81 – 97 in Ola Honningdal Grytten (ed.) *Nordic Historical National Accounts Proceedings Workshop IV*, Solstrand, November 13-15, 1998 (NHH, Bergen, 1998), p.85.

6 For a more detailed analysis of sources and reliability see Alexander Apostolides, "Cyprus and Malta: Data Resources on Former British Colonies", *Workshop Historical National Accounting Across Europe*, November 2006, NHH, Bergen

7 D. A. Percival, *Cyprus Census of Population and Agriculture 1946: Report and Tables* (Nicosia, GPO, 1947), p.56



whole period<sup>8</sup>.

Table 1 indicates a first approximation of the GDP of Cyprus and Malta with SEES. Such comparisons are purely indicative. The arbitrary choice of the beginning and the end of each series can alter the stated results; a peak-to-peak approach based on a common currency adjusted for the purchasing power parity of each state would be more reliable. The results shown for Cyprus and Malta are based on the results for the primary sector that have been calculated. It seems that both Cyprus and Malta exhibit similar rates of growth as SEES, but due to different reasons; Cyprus' growth was based on an impressive mining boom in the 1930s, while Malta's growth record was based in providing services for the British fleet.

**Table 1: Comparison of SEES 1921 -1939. GDP Per Capita Growth Rates**

| <i>Country</i> | <i>Period</i> | <i>Value Measurement</i>     | <i>Growth rate (%)</i> |
|----------------|---------------|------------------------------|------------------------|
| Turkey         | 1923 – 1939   | Geary-Khamis \$ 1990         | 5.4                    |
| Greece         | 1921 – 1938   | Constant Dracma 1914         | 1.6                    |
| Bulgaria       | 1921 – 1938   | Constant Leva 1911           | 1.7                    |
| Cyprus         | 1921 – 1938   | Constant Cypriot Pound 1938  | ≈ 1 - 3                |
| Malta          | 1921 – 1938   | Constant Pound Sterling 1938 | ≈ 0.5 – 1.5            |

Source: Martin Ivanov “Bulgarian National Income 1892–1924” (forthcoming) Table AO; Ivanov and Tooze (2007) p.684; Şevket Pamuk, in Pamuk and Williamson (2000) p.321, Table 12.1; Κωστέλενος, *et al*, *Ακαθάριστο Εγχώριο Προϊόν 1830 – 1939* (2007), Table 8-Ib; Own calculations based on the weight of the primary sector to the economy of Cyprus and Malta.

The agricultural output of Cyprus and Malta is presented below at Table 2. The agricultural growth in the interwar period was poor for both islands and does not follow the SEES growth pattern. The islands' agriculture barely kept up with the relatively rapid growth of population, while in the 1930s the agricultural sector was in decline for both islands.

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8 For more information on methodology see Apostolides Alexander, “The Good, the Bad, and the Ugly: Lessons Learnt in Estimating the Value Added of the Cypriot Primary Sector and Results” presented at the LSE Cliometrics Group, 22nd of January 2008, LSE, London. <http://personal.lse.ac.uk/colvinc/cliio/Apostolides-250108.pdf>

**Table 2: Growth Rates of Agriculture Value Added Per Capita 1921 – 1938**

| <i>Country</i> | <i>Period</i> | <i>Value Measurement</i> | <i>Growth Rate per Capita (%)</i> | <i>Population Growth</i> |
|----------------|---------------|--------------------------|-----------------------------------|--------------------------|
| Turkey         | 1923 - 1938   | GK \$ 1990               | 3.29                              | 2.04                     |
| Bulgaria       | 1921 - 1938   | Constant 1911            | 2.20                              | 1.29                     |
| Cyprus         | 1921 - 1938   | Constant 1938            | 0.189                             | 1.46                     |
| Malta          | 1921 - 1938   | Constant 1938            | 0.845                             | 1.35                     |

Source: Ivanov and Tooze (2007) p.701; Şevket Pamuk, (2000), p. 321, Table 12.1; Own calculations.

In fact the agricultural output of the islands followed different growth trajectories from each other as shown in Figures 1 and 2. In Malta the 1920s was a period of steady growth, followed by severe downturns in the depression and in 1936. The agricultural output of Cyprus in the 1920s was susceptible to cyclical fluctuations caused by irregular precipitation. The Great Depression was catastrophic for Cypriot farmers as Cyprus experienced one of the worst droughts in its history during 1930 – 1932. Thus in midst of global falling demand (and prices) for primary products, the Cypriot farmer was unable to stabilize his income by increasing his production due to low yields of crops during the drought. As a result, agricultural output in 1931 was lower than in 1921 and the sector found it difficult to maintain its pre-depression per capita levels in the subsequent recovery.

It is clear from Table 2 that agriculture failed to keep up with the growth rates of other SEES. In order to understand why agriculture in Cyprus and Malta did not follow similar growth trajectories a review of SEES historiography is necessary. The ultimate reasons for SEES agricultural growth are compared to the Maltese and Cypriot realities in order to understand the reasons of the islands' poor interwar agricultural output growth.

Figure 1. Cyprus Value Added Per Capita (1938 constant prices) 1921 - 1938: Agriculture, Mining and Primary Sector

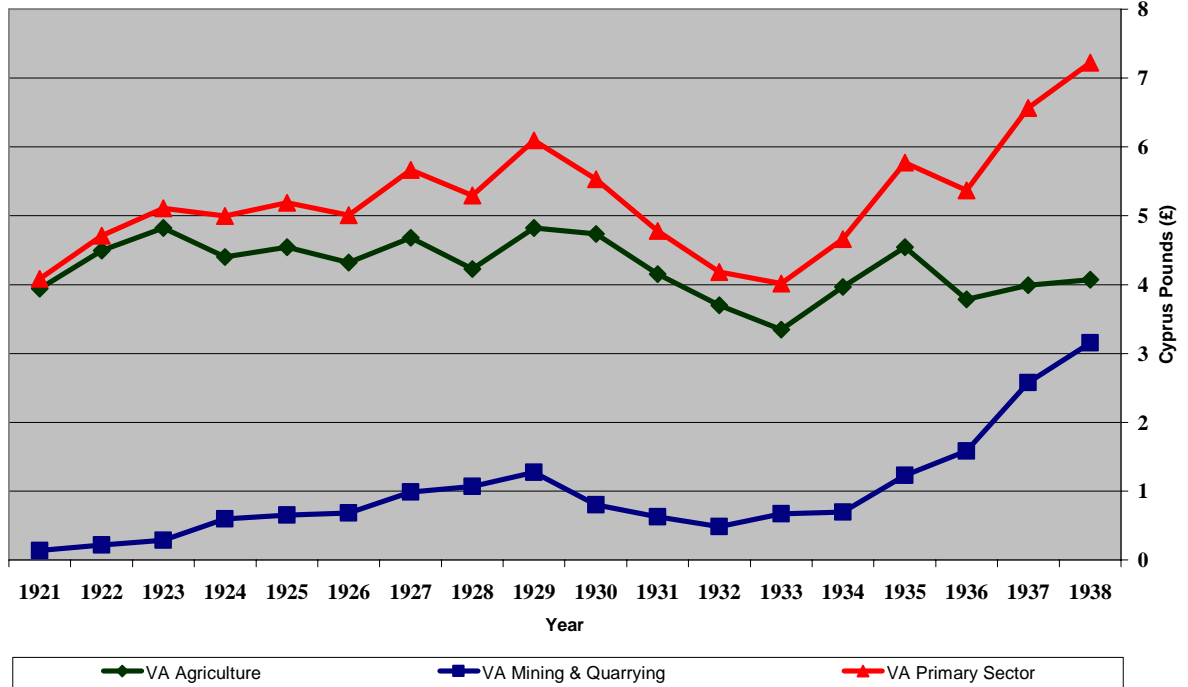
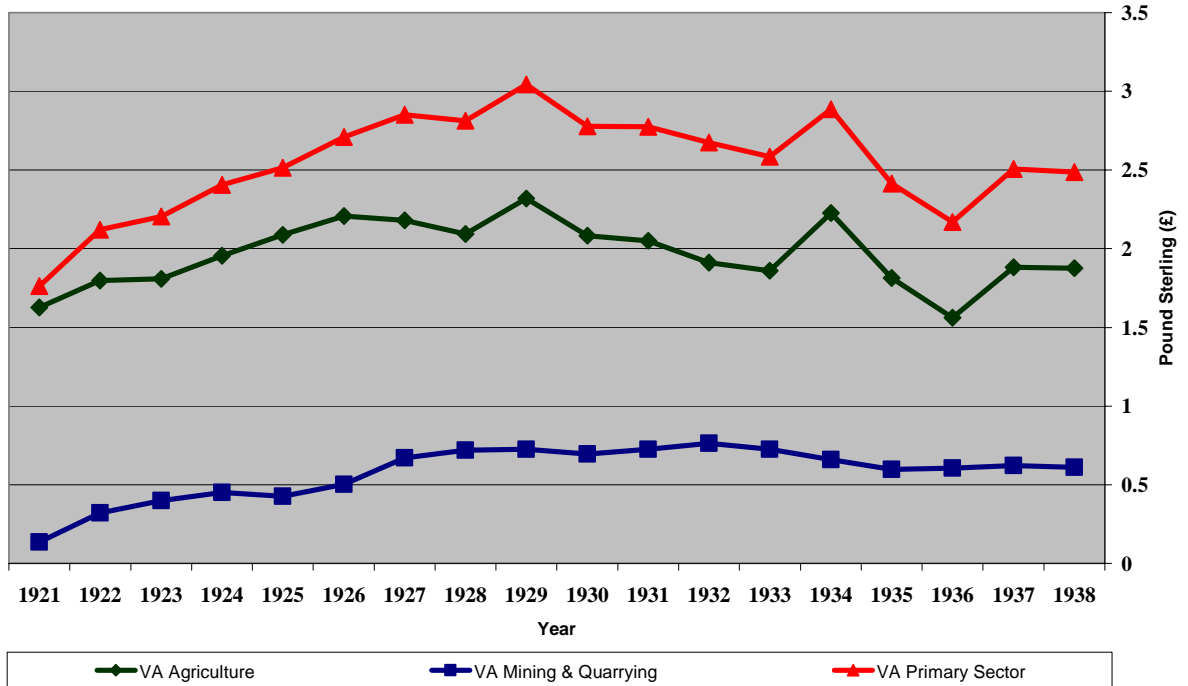


Figure 2. Malta Value Added per capita (1938 constant Prices): Agriculture, Mining and Primary Sector



## 2. Agriculture: Restraints and Opportunities

In SEES historiography, agriculture underwent a transformation during the interwar period. The pressure on land resources increased with the growth of population either due to high population growth rates or due to enforced migration. As a result of the increased pressure on land resources, more intensive forms of agricultural production developed over the period, resulting to a shift towards labour intensive products such as cattle derivatives and tobacco. This transformation took place despite the limited increase in farm mechanization as the scarce resource was not labour but land. In SEES historiography several reasons are thought to have accelerated the change to more intensive farming in the interwar period:

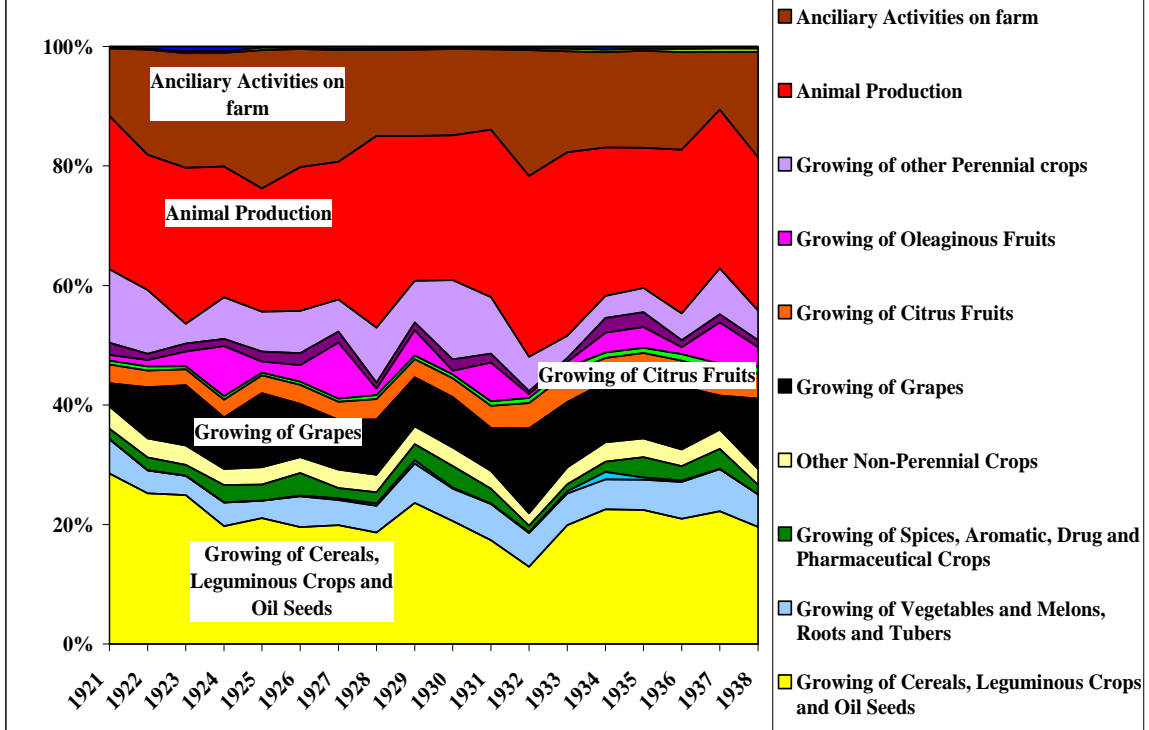
- Land reform and the subsequent reduction of farm sizes leading to specialization in higher intensity products such as animals or tobacco
- An increase of the agricultural labour force per hectare allowing for an increase of labour intensive agricultural production.
- Restraints and opportunities created by government policies of protectionism and investment.
- In most SEES a significant restraint on faster transformation was the heavy burden of rural debt held by farmers

Unlike Bulgaria and Greece, neither Cyprus nor Malta underwent a “green revolution” of intensified agriculture during the interwar period<sup>9</sup>. Figures 3 and 4 break down the total agricultural output based on the contribution of the sub-industries. By tracking the weight of each industry over time one can evaluate whether the product mix within agriculture moved away from products that were not intensively farmed.

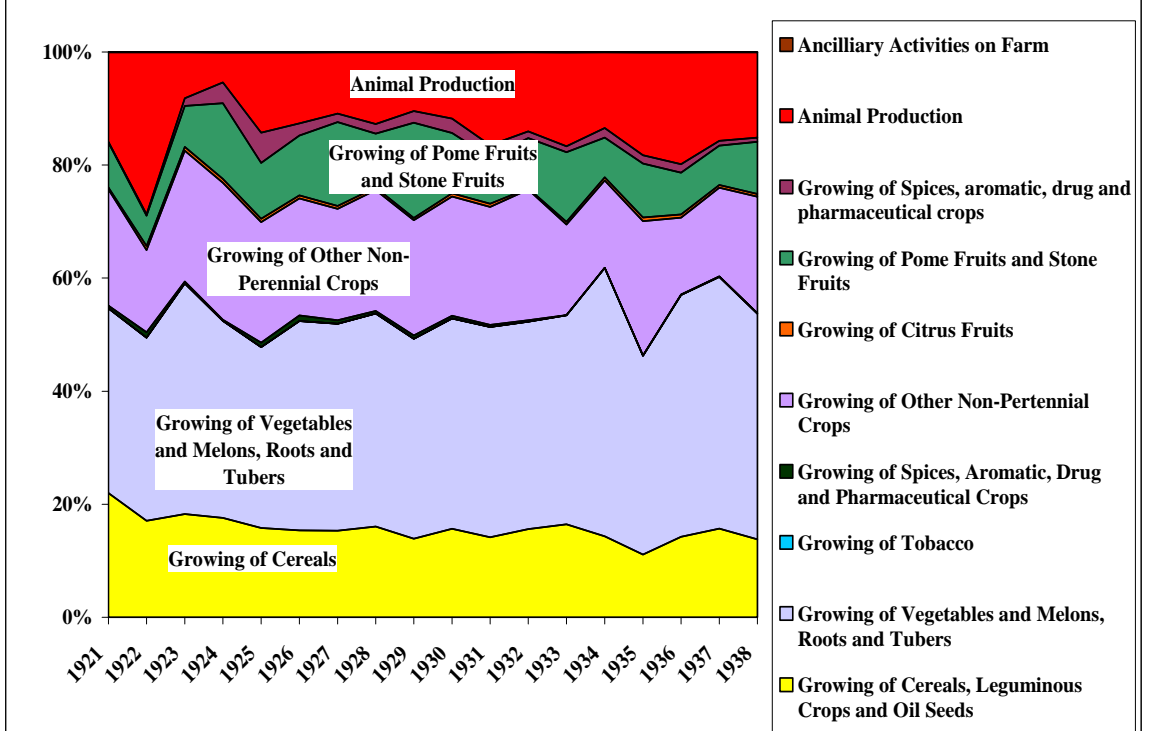
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<sup>9</sup> Ivanov, (forthcoming) p.12; Κωστής, Κώστας, *Αγροτική Οικονομία και Γεωργικαί Τράπεζαι: Όψεις της Ελληνικής Οικονομίας το Μεσοπόλεμο*, (Αθήνα: Μορφωτικό Ίδρυμα Εθνικής Τράπεζας), p.32. For an analysis of the 19<sup>th</sup> Century Green Revolution in Northern Europe see: Van Zanden, J. L. “The First Green Revolution: The Growth of Production and Productivity in European Agriculture 1870 – 1914”, *The Economic History Review*, Vol.44, No.2, (1991) pp.215-239.

**Figure 3: Percentage Area by Contribution To Gross Output (1938 constant prices)**  
Cyprus



**Figure 4: Percentage Area by Contribution to Gross Output (1938 constant prices)**  
Malta



Figures 3 and 4 indicate that a proximate explanation for the poor agricultural output growth for the islands could be caused by the slow increase of more intensively farmed products. Taking into account the short time period, it is clear that cereals that were not grown intensively remained a significant the proportion of the islands' total output throughout the interwar period.

The shift away from cereals and into more intensively farmed products such as potatoes, vegetables, fruit and grapes was very gradual. There was a decrease of cereal output and an increase in the importance of citrus and grapes in Cyprus, and vegetables and animal products in Malta, but the large shift away from cereal production took place only after the Second World War. Vegetables, potatoes, citrus fruit and grapes were the post-war success of the islands' agricultural sector, but only exhibited a steady rather than dynamic growth in the interwar period. Malta and Cyprus in 1938 were still dependent on the same agricultural staple products that they were producing prior to 1921.

The poor performance of cereal production created significant problems in both islands. The cultivation of cereals on the plains was considered as “the main activity of the farming community”<sup>10</sup>. However, it was not possible for the Cypriot or Maltese farmer, armed with primitive farming methods and equipment, to compete with the more fertile and productive cereal producers of the new world.

Thus the sluggish growth of agriculture on the islands is in part a failure to move away from cereals and towards a more intensive farming of agricultural products. The reasons for the lack of growth are presented below: it would seem that Cyprus faced similar economic problems with other SEES, combined in such a way preventing a shift towards intensive agriculture, while Malta's economy was very different in its structure.

Malta was in the unusual position to be an urbanized economy by 1921; unlike other SEES agriculture was not the most important sector in the economy of the island. The island was dependent on food imports since its occupation from the Knights Hospitallers in the 16<sup>th</sup> century. As a result, the population of Malta largely depended on attracting military expenditure from the ruling power for their well-being<sup>11</sup>. Some sectors

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<sup>10</sup> Oakden, Ralph, *Report on the Finances and Economic Resources of Cyprus* (Nicosia: GPO, 1935) p.11.

<sup>11</sup> Metwally, M., M., *Structure and Performance of the Maltese Economy* (1977) p.6.

of Maltese agriculture were already intensified prior to 1921. Cattle was imported, held in stalls and fattened on imported fodder prior to slaughter, while goat milk production was integrated with its market, as shepherds would bring their goats to the city and deliver fresh milk at people's doorstep. Such agricultural production seems already intensive in character, despite the poor quality of the end-product<sup>12</sup>.

It seems that the scarcity of land in Malta (as shown in Table 3) resulted in a shift towards intensive forms of agriculture much earlier than in other SEES. Unlike other SEES, land under cereals in Malta could not be easily transferred to other products. The unique geographical environment of Malta meant that cereal production in Malta was taking place on thin, marginal *Xaghra* soil where other remunerative uses were hard to find<sup>13</sup>. Cereal production in Malta seems to have been productive: if the reliability of the wheat and barley estimates shown in Figure 5 are to be trusted, Malta was already more productive in terms of yield of tons per hectare than other SEES states while using marginal land<sup>14</sup>. Malta's economic structure in the interwar period was very different than Cyprus and all SEES and thus any further intensification of agriculture would arise from capital intensity and not through the increase of labour intensive methods.

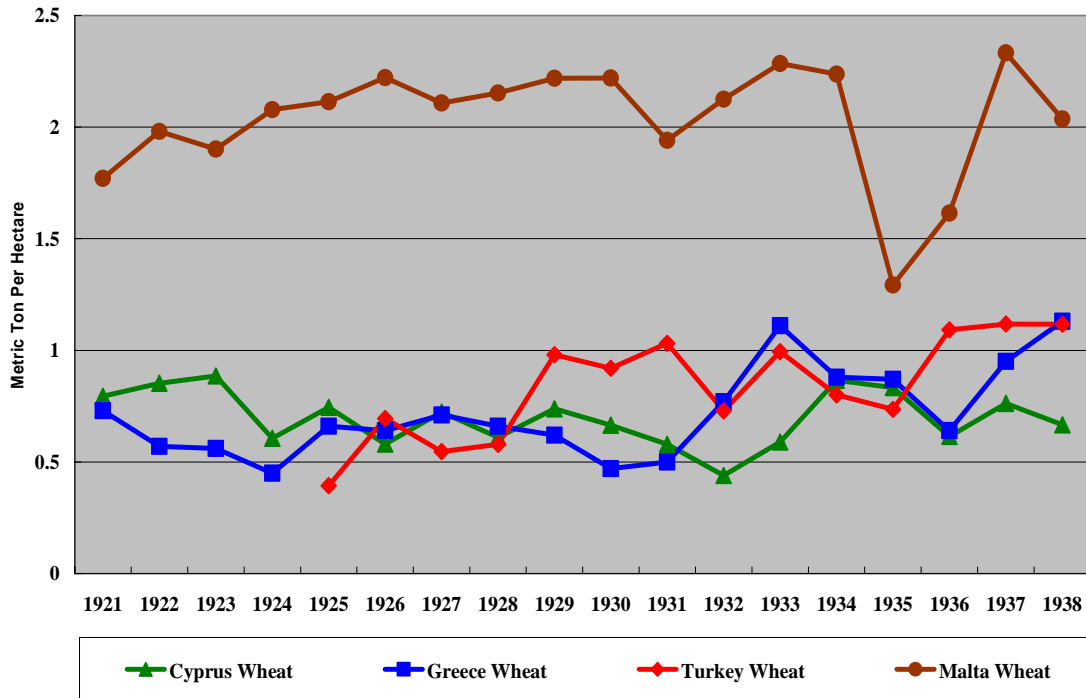
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<sup>12</sup> Busuttill Salvino, *Agriculture in Malta: A historical Perspective*, International Centre for Advanced Mediterranean Agronomic Studies <http://ressources.ciheam.org/om/pdf/b07/93400006.pdf> p.12; Potts, H. W. *Lecture on the Improvement of Livestock of Agriculture Delivered at the Palace* 06/02/1930. p.4; Stockdale, F. A., *Report on the Present Condition of Agriculture in the Maltese Islands 1934* (Malta: GPO, 1934) p.x.

<sup>13</sup> Bowen-Jones H., Dewdney J. C, Fisher W. B., *Malta: Background for Development* (Durham: Department of Geography, 1961) p.188; p.195, p.338.

<sup>14</sup> Bowen-Jones H. *et al.*, (1961) p.195. There is a possibility the acreage is underreported: however Bowen-Jones also reports high yields for the period 1948 – 1958.

Figure 5: Comparative Yields of Wheat (Cyprus, Malta, Turkey and Greece)



In Cyprus the switch to intensive agriculture was delayed until after the Second World War by the severe rural issues that also plagued other SEES during the interwar period. Rural debt, the lack of credit and issues of land ownership were important in retarding more intensive forms of agriculture. The Cypriot economy was directly dependent on its agricultural output in the interwar period. Unlike Malta, Cyprus fits in the typology of SEES economic structure, whereby the majority of the population was rural small holders. This majority of small holders had similar problems to farmers in other SEES, but the severity of their problems checked the shift towards more land intensive agriculture.

Fragmented land ownership was a problem for agricultural producers throughout the SEES, but as Table 3 indicates, it was especially serious in Cyprus. The property laws in Cyprus resulted in such a fragmented land ownership that led to Cypriot farms



becoming uneconomical even with intensive agriculture<sup>15</sup>. Land was not just fragmented in separate households but also scattered in several plots around a village. As a result, owners of such uneconomically small farms sought sustenance through other employment. This acted as a barrier to intensive agriculture: the labour force employed in agriculture was in decline in relative and (after 1931) absolute terms. There was no increase in the labour force per hectare to undertake the additional effort of land intensive farming<sup>16</sup>.

The extreme fragmentations of holdings functioned as a deterrent towards any efforts to change production to intensively farmed products. In using SEES typology there seems to be a floor of minimal farm size that leads to smaller holdings acting as deterrents rather than catalysts of change. The small and scattered plots of Cyprus were often too small to provide sustenance to the rural household; converting a portion of the land intensive farming and waiting to reap the benefit in the future could have resulted to destitution for many rural producers. The plots were too small and too diversified for some farmers to change products towards a higher value added intensive farming.

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<sup>15</sup> The property law could result to trees being owned in shares: Pitcairn, A. "The Agricultural Resources of Cyprus: the effect of natural and other factors on development", *The Cyprus Agricultural Journal*, Vol. XXX part 1 (1935) pp.6-18, p.11. For more information on the issue of Land Fragmentation see: Karouzis George, *Land Consolidation in Cyprus 1970 – 1990* (Nicosia: Ministry of Agriculture and Natural Resources, 1991).

<sup>16</sup> Own calculations based on the occupational statistics of the 1921, 1931 and 1946 censuses.

**Table 3: Agricultural Population and Farm Size in the 1930s**

| Country        | Agricultural Population per Km <sup>2</sup> of Arable Land | Percentage of Population by Farm Size in the 1930s (%) |          |            |            |
|----------------|--|--|----------|------------|------------|
|                |  | 1 - 5 ha   | 5- 10 ha | 10 - 50 ha | Over 50 ha |
| Bulgaria       | 95.4   | 29.1   | 37.3     | 32         | 1.6        |
| Czechoslovakia | 69.4   | 20   | 19.5     | 39.4       | 21.1       |
| Greece         | 86.7   | 16.9   | 11.7     | 21.6       | 49.8       |
| Hungary        | 63.1   | 14.6   | 12       | 22.1       | 51.3       |
| Italy          | 53.4   | 17.5   | 13.6     | 26.3       | 42.6       |
| Poland         | 86.9   | 14.8   | 17       | 20.9       | 47.3       |
| Romania        | 79.7   | 28.1   | 20       | 19.7       | 32.2       |
| Spain          | 34   | 18.8   | 7.1      | 15         | 59.1       |
| Yugoslavia     | 100.1  | 28   | 27.9     | 35.3       | 9.7        |
| Cyprus         | 95.6 <sup>+</sup>  | 38.4   | 44.5     | 16.9       | N / A*     |
| Malta          | 1048.5 <sup>+</sup>  | 70   | 30       | N / A*     | N / A      |

Notes: \* Some large estates did exist but were not enumerated separately for Cyprus and Malta. <sup>+</sup>For Cyprus and Malta the rural population was used. Source: Ivanov and Tooze, (2007) p.688; Malta, *Report of the Census of 1931, (1932)*; Malta, *Statistical Blue Book (1927)*, Bowen-Jones H., *et al*, (1961) p.289 Cyprus: *Report and General Abstracts of the Census of 1931, (1931)*; SurrIDGE Brewster Joseph, *A Survey of Rural Life in Cyprus*, (Nicosia: GPO, 1930) pp.54-58, Lanitis, Nicolas Constantine, *Rural Indebtedness and Agricultural Co-operation in Cyprus*, (Limassol: 1944, Revised 1992) p.9.

Cyprus also suffered from high levels of rural debt that plagued other SEES<sup>17</sup>. The First World War created a demand for Cyprus' staple products such as grain, carobs and grapes and land was purchased to increase output; the recession of 1921 found many farmers overexposed to informal creditors. The crippling amount of rural debt was the major economic issue of the day, promoting several governmental reviews. SurrIDGE estimated rural debt in 1930 as £1769043 or as £5 per capita. After the disastrous combined effects of the Great Depression and the drought, Oakden estimated that debt defaults increased; the total rural debt in 1934 was estimated as £2000000 or as £5.4 per capita<sup>18</sup>. By 1940 the debt increased at £2329000 or to £5.7 pounds per capita; the issue

<sup>17</sup> Aldcroft, Derek H., *Studies in the Interwar Economy* (Aldershot: Ashgate, 1997) p.167.

<sup>18</sup> SurrIDGE Brewster Joseph, *A Survey of Rural Life in Cyprus*, (Nicosia: GPO, 1930), p.37; Oakden,

was considered so detrimental to the war effort and a Debt Settlement Board was set up to renegotiate and liquidate any outstanding rural debt<sup>19</sup>.

The rural debt was owed mainly to informal sources of finance; money lending was the primary source of credit for the rural credit market. The failure of farmers to repay such loans prevented any attempts of diversification by limiting the supply and demand for credit. If farmers repaid their debt the income was squeezed and capital investment was put on hold. If farmers defaulted, the supply of informal credit was curtailed. Its lack of repayment (combined with the poor economic climate) resulted in freezing the rural credit market. The credit needed to allow farmers to switch to intensive agricultural production was not available due to the informal credit freeze.

The case study of the Mesaoria plain can be used to best explain the critical role of credit in any attempt of agricultural diversification. Mesaoria is a large central plain in Cyprus that was primarily dry-farmed for cereals. By 1921 it was clear that large parts of the plain could have been converted to intensive citrus production if sufficient investment in irrigation and trees was made. However the cost of converting Mesaoria land to citrus production was prohibitive for the cereal small holder. An analysis of farming costs in 1938 estimated that the cost of maintaining one hectare of citrus cultivation for the first four years until the first crop is sold was £737 pounds<sup>20</sup>. Thus a cereal farmer needed to find the capital to set up citrus production and sustain his household for four years at a time when his income was already decreasing due to the fall of global cereal prices. Since the farming community was relatively isolated from formal banking, and with government efforts for rural credit and irrigation already suffering due to the lack of repayment by farmers, it was difficult for the owners of small and scattered plots to borrow such an amount so as to undertake the conversion<sup>21</sup>. The path to higher value intensive agriculture was available; but the lack of access to sufficient capital during the interwar period prevented Cypriot agriculture from rapidly initiating such a

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(1935), p.105.

<sup>19</sup> Nicolas Constantine Lanitis, *Rural Indebtedness and Agricultural Co-operation in Cyprus*, (Limassol: 1944, Revised 1992) p.17; Cyprus, *Report on the activities of the Debt Settlement Board*, (Nicosia: GPO, 1945) p.1.

<sup>20</sup> James H. M. and Koumides, C. "An Analysis of Farming Costs in Cyprus (Part 2)", *Cyprus Agricultural Journal*, Vol.XXXIV, Part.3 (1939) pp. 99 – 100.

<sup>21</sup> Phylaktis, K., "Banking in a British Colony", *Business History*, Vol.30, No.4 (1988), pp. 416-431 p.418.

transformation.

The pivotal importance of credit is made clear by the reactions of Cypriot farmers faced with such a large capital necessity. As farmers found it difficult to secure this large amount of necessary credit to shift to more intensive forms of production, smallholders attempted to increase the productivity of their land by investing in smaller capital outlays, which they could afford by increasing the use of artificial fertilizer. As a result, Surridge claims that the use of artificial fertilizer in cereal production was excessive in 1929<sup>22</sup>. What agricultural producers needed in order to shift away from cereal dry farming was sufficient credit: the lack of such credit led to Cyprus failing to transform its agricultural sector and thus lag behind other SEES in terms of agricultural output growth.

The very small holdings and the freezing of credit through rural indebtedness resulted in capital scarcity. Cypriot farmers, facing decreasing prices and owning small and scattered landholdings, could not muster enough capital so as to shift land from cereals to citrus production by installing water pumps and purchasing trees. Although the government did provide loans through the rural co-operatives and a small agricultural bank, such institutions parceled credit in small amounts to as many farmers as possible rather than provide enough money to some producers to install an irrigation system, plant trees and be sustained until the trees bore fruit .

Cypriot agriculture did not diversify its production mainly due to a lack of access to sufficient capital. The farmers responded to the lack of sufficient credit in several ways. Cereal farmers increased the amount of fertilizer they used, found income sources unrelated to agriculture and worked harder to increase the output of existing products rather than change to more remunerative ones. The estimated output per worker in the Cypriot agricultural sector indicates that there was a steady increase of apparent labour productivity of 1.4% per annum<sup>23</sup>. As a result there was not a great shift to other products; credit constraints prevented the Cypriot agricultural sector from undertaking the transformation to more intensive forms of agriculture and suffered low growth rates as a result.

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<sup>22</sup> Surridge, (1930), p.63.

<sup>23</sup> Own calculations using output, and extrapolating yearly occupation rates for agriculture using the 1921, 1931 and 1946 Cyprus censuses.

The relative failure of the Cypriot agricultural sector in the 1930s was contrasted to the dramatic growth of mining, particularly of the copper mining industry. The mining sector employed far less workers than the agricultural sector but grew by leaps and bounds in the mid-1930s onwards. In 1921 the sector was very small, consisting of some asbestos and limited cupreous pyrite mines. The development of new copper seams resulted to the rapid explosion of output; by 1938 the mining sector was providing 44% of the primary sectors' value added. It is clear that the mining sector transformed itself from an insignificant part of the economy in 1921 to the main driver of growth in the post-Depression recovery. In terms of size, agriculture was still the most important sector in Cyprus; however in terms of growth and productivity mining and quarrying were the important sectors of the Cypriot economy in the 1930s.

### **3. Conclusion**

Using the historiography of SEES states to evaluate the economic history of Cyprus and Malta leads to a greater understanding of the poor performance of the islands' agricultural sectors during 1921 – 1938. The economic structure of the Maltese islands suggests a very different form of underdevelopment. Unlike the SEES and Cyprus, the majority of the population of Malta did not depend on the agricultural sector for their survival. Due to the pressure of the population and environment, agriculture undertook intensive cultivation earlier. In contrast, Cyprus shares most of the problems exhibited by other SEES states. However the extensive fragmentation of holdings combined with a severe lack of sufficient credit prevented cereal farmers from shifting to more intensively farmed products. Informal markets could not provide the necessary credit to allow a shift to more remunerative products. As a result, Cyprus did not follow the SEES rates of agricultural output growth; the growth rate of agriculture was muted as labour sought employment elsewhere. Finally, the real growth in the economy of Cyprus and Malta did not stem from their agricultural sectors. The mining sector boom in Cyprus accelerated the GDP growth of the economy, while Malta still depended on providing services for the British Navy.

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