The Size of SSE (Social and Solidarity Economy) and Income Distribution in the European Union: Implications for Developing Countries

By

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Abstract

The focus of this paper is to find some empirical evidence that an increase in the size of SSE actually contribute to the national economy in terms of income distribution. EESC (2012) was an exceptional source for the research since it reports the relevant data needed for the analysis. A major interesting observation from our empirical research is that in a cross-sectional analysis, we find strong negative correlation between the size of SSE and bad income distribution, when we use volunteers as a proxy for the size of SSE. In the case of cooperative employment, the result is not clear enough. Another candidate for a proxy, the ratio of total employment in SSE, has consistently shown the positive correlation. One major implication is that socio-economic factors surrounding the economy may be more important for an expansion of SSE than deliberate policies directed for an increase in the size of the sector; SSE may be responding to bad income distribution.

Key Words : SSE, Income Distribution, EU, Empirical Evidence, Reversed Causation

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I.   Introduction

The global economic crisis since 2008 has made people feel that capitalistic and free market development does not always guarantee a happiest solution in addressing the challenges of today.   In fact, it is in vogue in the academia along with business to seek another perspective.   The so called SSE (Solidarity and Social Economy) approach is one of those alternatives being proposed to mitigate the ills of the state and market led economies. According to OECD report the third sector institutions are particularly relevant for communities that are affected negatively from economic restructuring and social changes driven mainly by the globalization process, (OECD, 2009). Unfortunately, however, the concept is not always clearly defined and various researchers use as many approaches and definitions as available depending on their orientation of the discussion.

In their book for the ILO, Fonteneau et al (2011) defined the social and solidarity economy (SSE) as a concept that refers to enterprises and organizations which specifically produce goods, services and knowledge while pursuing economic and social aims and fostering solidarity. The EU on the other hand stresses a definition that emphasizes the behavior of the actors who are either private or formally organized organizations comprising of both the business and market sector or sometimes non-market sector. Such differences in definition make it much more challenging to measure its size and performance in society since it is sometimes less clear if an organization belongs to this sector. (European Commission, 2013). This paper conceptualizes SSE focusing mainly on cooperatives, mutuals, associations, and arguably volunteers, following the analysis of the latter.

Much as this approach to development is laudable, the actual performance and social impact of SSEs in most nation states is not systematically analysed even though there are numerous impressive episodes of individual cases. Comparisons across countries are also limited due to a lack of standard indicators on the size and outcome of this sector. This paper is designed to capture alternative proxy variables to commonly measure the size of SSE across countries following the same criteria and find some evidence whether its expansion actually contributes to a betterment of a society.

II.   Empirical Model and Estimation

The flourishing shake of proposals and policy implications of recent literature defending the increasing share of SSE in the economy are in general, without much evidence backed up by real data. It is obvious and understandable that most of the work so far in the SSE sector has been based on qualitative research. Curran and Blackburn (2001) claim that quantitative research methods are not as effective as qualitative research methods in capturing and explaining the nuances and peculiarities of working practices in small businesses.. Much as we agree with this statement, we think there is the need to move studies in this area to include quantitative methods since a lot of work has been done to capture the nitty-gritties of the practices in this sector through a qualitative research. A quantitative method would allow for a more standardized form for comparisons across countries.

We need to know at least, that an increase in the size of SSE actually has something to do with the indicators of development, like GDP growth or an improvement in income distribution. This paper is to test whether SSE is beneficial to the economy as a whole. Since there are too many variables to explain GDP growth and objectives of SSE are not directly related to a growth in income, we mainly focus on its effect on the distribution of income[1]. It is generally expected that if the size of SSE increases, income distribution will be improved. There are two empirical issues included in this testing.   First, we do not easily find a proxy for measuring the size of SSE in the economy.   Second, we should find a performance measure in the economy related with income distribution which is expected to have a strong correlation with the size of SSE.   The former constraint is more critical.   A reliable data is only available for EU countries, which is surveyed in 2010 (European Commission 2013). They published the number of cooperatives and its employment compared to total employment, number of people active in voluntary social service, and mutuals and associations.   Since we do not have enough data reliable except the case of EU in 2010 , it is inevitable for us to use cross sectional analysis at the point of 2010, focusing on EU countries..

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[1] The term 'Solidarity and Social' is strongly related with the concept of 'sharing' welfare and income across individuals in a society, implying that SSE could contribute to a betterment in income distribution.

II. 1.　Empirical Model

A performance measure of the economy – a measure of income distribution- is selected for the dependent variable Y.　Independent variables are i) some control variables X ii) a proxy variable capturing the size of SSE.　Therefore, our empirical model may be described as follows.

1)　$Y_i = f(X_i,\ S_i)$

Y is a performance measure of the economy, i.e., a measurement of income distribution like Gini coefficient or relative income share.　X represents control variables, like GDP per capita, unemployment, agricultural share in GDP, trade openness, minimum wage, and income gap in the labor market[2]. S is a proxy for the size of SSE, like employment share of the cooperative sector (the number of (formally) employed in the cooperative sector divided by total employment) or that of mutuals or associations, or the size of voluntary associations (the number of registered volunteers divided by total population).

II.2.　Data and Estimation Results

II.2-1.　Data description

Due to the scarcity of the consistent measurement of SSE across countries for this analysis, the main source was from a report entitled "The Social Economy in the European Union" which is drawn up for the European Economic and Social Committee by the International Centre of Research and Information on the Public, Social and Cooperative Economy (CIRIEC). Other data sources were the World Bank data and the European Statistics (Eurostats) sites.

Proxy indicators capturing the size of SSE such as the number of cooperative employment, total employment in SSE and volunteers in the SSE sector are drawn from the report and other explanatory and dependent variables like GDPpc, unemployment and GINI coefficient (disposable income) were collected mainly from WB data or Eurostats. The main dependent

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[2] For instance, see H.Y.Lee et al (2013) for a selection of explanatory variables for income distribution.

variables were GINI and S90S10, which is ratio of the top 10% income earners divided by the bottom 10%. The estimations and findings are presented below.

II.2-2. Estimation

If the dependent variable is Gini, we may introduce control variables GDPpc, and macroeconomic variables like unemployment, agricultural share in GDP, trade openness (trade/GDP), and microeconomic variables like minimum wage or wage gap. Since we have a data constraint, we focus on the most effective control variables including GDPpc. And unemployment. So our basic model is

ID = f (GDPpc, GDPpc-sq, Unemp, size of SSE)

Where ID=income distribution measures like Gini or S90S10, GDPpc-sq= GDPpc squared Unemp=Unemployment rate   Due to data limitation, we introduce only three control variables following related literature, i.e., log (GDPpc), and [log(GDPpc)]-square, and unemployment rate. There are three candidate variables for capturing the size of SSE ; i) number of paid employment in the cooperative sector (divided by total employment) ii) total employment in SSE (divided by total employment in the economy) iii) number of volunteers (divided by total population).   Candidate 1 is applying a narrowest concept of SSE confining only to the cooperative sector, but an advantage of using this variable is that the number is relatively reliable. Total employment in SSE is a variable discussed in European Economic and Social Committee (2012). This number is favorable in the sense that it includes all the components (cooperatives, mutuals, and associations) of SSE.   Unfortunately, however, many countries do not report some of the numbers in the list. This means that the total may be misleading since 'unavailable' category is treated as being "nonexistent".   The number of volunteers is included as a candidate variable since it can represent the social atmosphere toward SSE sector. For a dependent variable representing income distribution, we choose Gini coefficient. Since SSE is poorer people oriented, we may use another measurement of income distribution. For instance, we can use top 10 % share divided by bottom 10 % share as an income distribution index. The estimation results are as follows.

< Table 1 >　　The size of SSE and Income Distribution : Cooperative Employment[3]

Dependent Variable : 2010 GINI

Model		Coefficients		t	Sig.
		B	Std. Error		
1	(Constant)	5.916	28.530	.207	.838
	lnGDP	1.715	2.633	.651	.524
	Coop_TotEmp	-.021	.057	-.379	.710
	unemp10	.518	.208	2.487**	.024

*significant at 10%, **significant at 5%, 　***significant at 1%

Dependent Variable : S90S10

Model		Coefficients		t	Sig.
		B	Std. Error		
	(Constant)	11.404	17.020	.670	.512
	lnGDP	-.632	1.571	-.402	.693
	Coop_TotEmp	.059	.034	1.746*	.099
	unemp10	.166	.124	1.333	.200

*significant at 10%, **significant at 5%, 　***significant at 1%

The table shows that there is a negative, but insignificant correlation between a proxy variable for the size of SSE (i.e. number of cooperative employment divided by total employment) and Gini coefficient[4]. But if we use relative income share of top10 % to bottom 10 % as a measurement of income distribution, we find a significant positive correlation between the two variables. The result shows that cooperative employment as a proxy may be negatively associated with Gini, but positively related with the relative share.

To explore the relationship in more detail, we may use the ratio of total employment in SSE

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[3] GDPpc-square is omitted since it is not our concern to explain income distribution per se, and this inclusion does not contribute to the explanatory power of the model.

[4] We tried several different models for control variables, like agricultural share in GDP, 　trade openness, minimum wage, wage income gap, just name a few. 　However, GDPpc and Unemployment rate are found to be very effective control variables and including other variables, due to data limitation, does not improve the empirical results. 　Hence estimation results of other models are not reported here.

to total employment in the economy. The following is the result of this regression.

< Table 2 > The size of SSE and Income Distribution :   Total Employment in SSE

Dependent Variable : 2010 GINI

Model	Coefficients			
	B	Std. Error	t	Sig.
(Constant)	4.634	23.619	.196	.847
lnGDP	1.650	2.168	.761	.457
unemp10	.531	.171	3.106***	.006
empTot2010	.000	.000	2.759**	.013

*significant at 10%, **significant at 5%,   ***significant at 1%

Dependent Variable : S90S10

Model	Coefficients			
	B	Std. Error	t	Sig.
(Constant)	6.341	17.187	.369	.717
lnGDP	-.143	1.578	-.091	.929
unemp10	.219	.124	1.763*	.096
empTot2010	6.016E-5	.000	1.531	.144

*significant at 10%, **significant at 5%,   ***significant at 1%

  These results show that as the size of SSE increases, income distribution is becoming worse. Of course, this does not mean that a larger size of SSE causes a bad income distribution. It only shows that they have a positive correlation. This observation is very interesting, however, since it contradicts our intuition.

To check the relationship between the size of SSE and income distribution in more detail, we run a regression using another proxy variable for capturing the size of SSE, i.e., the ratio of volunteers among total population..

This result is summarized in the following table.

< Table 3 > The size of SSE and Income Distribution : Volunteers

Dependent Variable : 2010 GINI

Model	Coefficients			
	B	Std. Error	t	Sig.
(Constant)	-2.631	25.975	-.101	.920
lnGDP	2.991	2.449	1.221	.239
unemp10	.384	.193	1.986*	.063
volpop	-16.945	8.391	-2.019*	.060

*significant at 10%, **significant at 5%,   ***significant at 1%

Dependent Variable : S90S10

Model	Coefficients			
	B	Std. Error	t	Sig.
(Constant)	.119	16.161	.007	.994
lnGDP	.872	1.523	.572	.575
unemp10	.121	.120	1.006	.329
volpop	-12.420	5.221	-2.379**	.029

*significant at 10%, **significant at 5%,   ***significant at 1%

As can be seen from these two tables, the ratio of the number of volunteers among population has a strong negative correlation with bad income distribution. The coefficients are negative and significant.

In summary, we find the following observations.

1) Cooperative employment as a proxy has an ambiguous effect on income distribution; it is found to improve Gini but the statistical significance is weak. Its effect on relative income share is positive (meaning worsened income distribution) and significant.

2) Total employment in SSE as a proxy shows a strong positive correlation with both

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income distribution indices, meaning that its expansion hurts income distribution.

3) The ratio of the number of volunteers among population has a strong and significant negative correlation with income distribution indices, meaning that its expansion improves income distribution.

III.　Implications and Concluding Remarks,

The focus of this paper is to find some empirical evidence that an increase in the size of SSE actually contribute to the national economy in terms of income distribution. This task is confronted with some challenges. One is that we do not have a reliable statistical measurement capturing the size of SSE. This happens in part due to the delicate and rather slippery concept of SSE, but also the lack of concern and methodology on the part of member countries. EESC (2012) was an exceptional source for the research since it reports the relevant data needed for the analysis. This report was the starting point of our research. Due to data limitations, however, we can only introduce most undisputable control variables, not comprehensive of course, which may discourage the importance of our regression results. A major interesting observation from our empirical research is that in a cross-section analysis, we find strong negative correlation between the size of SSE and bad income distribution, when we use volunteers as a proxy for the size of SSE. In the case of cooperative employment, the result is not clear enough. Another candidate for a proxy, the ratio of total employment in SSE, has consistently shown the positive correlation. This finding should not be interpreted too seriously, since the data is, in a sense, flawed; many countries actually did not report important statistics and they are treated as being "nonexistent"[5]. But this observation per se is very interesting, requiring more sophiscated analysis and explanations.

One challenging observation to note is that the number of volunteers (divided by population) has a strong negative correlation with bad income distribution. This may imply the relative importance of this sector as a means of improving income distribution. One interpretation may be that as higher percentage of people are involved in volunteer activities, more people will be open to an idea of cooperation and help, leading to a better income distribution.

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[5] We did a regression with countries reporting all the needed information, but we find the result is basically same. This observation strongly indicates that we need more careful approach.

Another observation in need of careful explanation is the reason why more relevant proxy variables like cooperative employment and total employment in SSE do not show the expected result. These variables either show weak statistical result or wrong signs. This may come from reversed causation (i.e., bad income distribution encourages people to be more involved in SSE activities) or improper data quality. This result, however, should not be interpreted as saying that policies *expanding* the size of SSE per se is meaningless. A limitation of our research is that we only cover a cross-sectional data for developed countries. If panel data is available, we may find more fruitful and meaningful result which may be different from our observation. It also should be emphasized that SSE may be useful for employment protection under economic crisis and a stabilizer of a national economy when the country is hit by insecured risks. These potential contributions of SSE should be explicitly modeled and appreciated in our future research.

Finally, what are the implications for the developing countries? One major implication is that socio-economic factors surrounding the economy may be more important for an expansion of SSE than deliberate policies directed for an increase in the size of the sector; SSE may be responding to bad income distribution. This means that people are motivated to participate in SSE movement under some circumstances imposing unfavorable consequences. Another implication is that volunteerism may be a very good sign for an improvement in income distribution. Policies toward SSE sector may be more productive when there is a need among people to participate, i.e., under unfavorable socio-economic circumstances. To find an empirical evidence for the reasoning is in the realm of our future research.

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