The Puzzle of Middle Class and Growth in Egypt (1990-2008)

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Abstract

The study seeks to trace the missing connection between the middle class and growth in Egypt. The research is assessing whether distributional changes were in favor of the poor before the Arab spring. Based on the methodology of Ravallion and Chen (2003), Kakwani and Pernia (2000), and Kakwani et al. (2003) using a grouped data, the paper generates the three indices to test whether distributional changes were indeed pro-poor during the period (1990-2008), that should be correlative with the size of the middle class. The middle-class puzzle in Egypt has followed the path of bulging in size under certain thresholds even if growth was not in favor of the poor.

Keywords: Middle class, Economic growth, Egypt

JEL classification: j31, o1

Introduction

The revolutions that swept the Arab region unleashed new aspects of thinking, especially that the people who led the revolutions were not the poor rather they were a middle class, whose scholar Birdsall (2011) called them "the catalyst middle class". Looking up the MENA region it has the largest proportion of the population which can be considered a middle class among the six regions, it increased from 75.5 percent of the population in 1990, to 78.7 percent in 2005 according to Ravallion (2010). The Tunisian revolution that started the political uprising wave in the region it was sparked by what conventionally is considered a middle-class citizen (Bouazizi), that urges to search of what lies under the surface of income lines especially these countries were considered to have achieved a considerable rapid economic growth (Egypt & Tunisia).

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Ironically, it appears that Egypt has strong middle class according to the absolute threshold which represents about 85% of the population in 2008 using Ravallion's thresholds, which contradicts with the volatility of the economic growth performance(1990-2010).However the relative line may delineate another view of shrinking in the middle class, it presents about 43% of the population by deploying Easterly (2001) and striking results it falls to Zero size of middle class by applying Birdsall (2010). By using the thresholds between the national poverty line and the median to size the middle class may shed a light on a class they escaped from poverty and t may be called the middle class by crossing the lower threshold but they are still the most vulnerable to poverty traps "New Strugglers" as Birdsall (2013) described them.

Inevitably economics growth is necessary for enlarging the pie of the economy but economic growth can't be taken as the only driver of the increase of middle class (MC), the initial levels of inequality has a huge effect on the extent to which the size of MC responds to economic growth. The interplay between the three main elements of poverty, inequality and growth constitute the main influence on determining the size of the middle class, these three elements are the core of pro-poor growth policy. According to 2030 vision, Egypt has adopted an inclusive growth concept which means Egypt has to achieve a growth that must be in first place a pro-poor growth, which entails making poverty reduction a priority and pushing the poor to a new class. That urge a further query regarding those who escaped from the poverty zone which class is moving? Considering the middle class is the group of population is defined as neither poor nor rich "middle class" (Bridsall 2007). The contribution of the study that it raises the questions regarding evolution of middle-class size in Egypt. Which thresholds could be more proper to capture the real size of MC? Was growth really pro-poor in Egypt during the period (1990-2008)?

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The study contributes to the literature on measuring pro-poor growth (PPG) beyond the growth incidence curve before the revolution, as it may monitor the evolution of this class during two decades. It generates the three main PPG indices; Ravallion and Chen index (2003), Kakwani, Khandker, and Son (2003), and Kakwani and Pernia pro-poor index (2000). The main results show that growth was pro-poor during the two sub-periods periods (1990-1995) & (2004-2008). This drastic increase in the size of MC, even when growth is not pro-poor contradicts the interplay factors of pro-poor growth, growth, poverty, and inequality.

The rest of the paper is structured as follows; Section two provides a review of the definitions of the middle class, the evolution size of middle-class size in Egypt, and a proposed median threshold. Followed by the main indices of pro-poor growth finally the conclusion.

2) No consensus on who could be middle class citizen

According to **(Wilson&Dragsanu 2008)** by 2030, two billion new people may join the world middle class. Some narratives argue that the next decades will witness major economic changes, due to shifting the spending power towards the middle-income economies and away from the rich countries. With the rise of BRICs countries**,** the accelerating growth rates of China and India have played an important role in generating the middle-income bulge in the developing countries, China succeeded to achieve a major poverty reduction that results in that half of the 1.2 billion new entrants to the middle-class over 1990-2005 by Ravallion (2009).

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Branko Milanovic (2011) in his estimation of global inequality that in the mid-nineteenth century, about half of global inequality could be accounted for by unequal incomes within countries and the other half to inequalities in average incomes across countries. The split is 80 percent in favor of cross-country income differences, with only 20 percent of global inequality accounted for by income differences within countries, which means that global middle class reshaped and any shrinking of the size of the middle class means fighting against a rising wave of inequality.

Other scholars, Bridsall (2010), Home(2010), and Abd Gadir (2010) have shed the light on the middle class and its essential role in promoting the world consumption, especially after the world financial crisis by mid-2008, and the downturn of the global economy following the crisis , middle class role became a focus point to retrieve the world economic balance. Till the time of writing this line, the definition of the middle class is still debatable; there is certainly no consensus on the definition among economists of what are the income thresholds of the middle class for the developing countries that suffers from poverty and inequality besides low growth rates, how the middle class can be expanded probably through poverty reduction and lowering inequality. Looking at middle class picture , middle class differs from place to place from one economy to another, indeed defining the standard of living of a person to be classified as 'middle class" depends on the average level of income of the country, then it is acceptable to say that in a low-income country, the middle class may correspond to the poor in a high-income economy.

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2.1 Can we define the middle class through schools of economic thinking?

Back to **Adam Smith** definition of the classes on the basis of the objective position of the individuals who constitute them in economic life , where the objective class is considered to be the consequence of his or her specific economic function, Smith presented the classical school where classes categorized into three ; the capitalists (owners of the means of production), who gain profit as income; the workers who gain wages as income; and the land-owners, who gain rent as income (from the renting of their fields to the capitalist-farmers). While *John Stuart Mill* extended the principle of what he called the friendly merger that examining how non-economic factors like government, traditions, or custom influence the class structure. Then the middle-class definition still swings between economic and social approaches.

Social scholars presented two main sociological theories. The Marxian social class do not refer to types of occupation or levels of income but on the form of physical and capital endowments that each social group possess. *Marx* called the existence of a small, independent group of businessmen and professionals who acquired skills, knowledge, and education as the *petty bourgeoisie*. The *Weberian's* defines classes due to inequalities in income, educational attainment, power and occupational prestige. Class was the way that economic power is distributed in tandem with economic action with suitable degree of rational manner. So, class was bound to the production of goods, while status of any group was stratified according to their consumption of goods "**style of life** ".

Moving to **Thorpe, G. and Mcknight** (2006) who adopt employment-based class position in depending on individual's economic security and economic stability. **Wright (2005**) conceives of classes as being structured mechanism of domination and exploitation in which economic positions accord some people power over the life's activities of others.

After all the social string of defining the middle class, income is still a tempting proxy by choosing two income thresholds, it's easy to determine whose below the lower line "poor ", and those above the higher one "rich" and in between them is the middle class. Nevertheless, a purely economic point view to define and calculate of middle class fluctuates depending on the purpose of the calculations and its relationship with other factors; growth, democracy, political issues …etc. These differences are also due to the changing nature of the fundamental used tools of calculations (poverty line, median, and the mean income). Also, it's noticeable that there are three main methods of measurements: absolute, relative and hybrid approach. The choice between these methods depends on the purpose at hand.

2.2 Income –based absolute approach

Assumes fixed income threshold (PPP adjusted) which raises a lot of arbitrary views in addition to the heterogeneous of countries' development level. Among absolute measures **Yitzhaki's study (2002)** about decomposing the world distribution for 114 countries into three groups and used households surveys, came out with a shocking result that only 11% of the world are middle class by using the definition of the middle class as those living between the mean incomes of Brazil and Italy, which translates into roughly $12-$50 a day per person at 2000 (PPP).

World bank (2007*)* defines global middle Class, as the per capita income thresholds are approximately equal to $4,000 and $17,000, according to this definition many of the relatively rich in developing countries are in the global middle class, while the vast majority of the absolutely rich (per capita incomes above $17,000) live in OECD countries. **I**n the context of the debate about the role of china's consumption in the global economy

2.3 Absolute measure

Homi& Gerts (2010) pushed for an, sensed the distinctive roll of middle class especially the American's middle class decline   after the world turmoil by mid-2008, urging that China could be the potential middle class substitute, where middle class expanding exponentially, define middle class as those households with daily expenditure between $10 and $100 per person in PPP terms. The lower bound was chosen with the reference to the average poverty line in Portugal and Italy, while the upper line was chosen as twice the median income of Luxemburg. By applying this methodology for 145 countries, came up with the ascertain that the world in the throes of a major expansion in the middle class most of it will come from Asia particularly from China.

From a pro-poor growth perspective, **Birdsal (2010**) rejects the idea that anyone escapes from the poverty line on just $2 a day is a member of middle class, which would never make any sense of reasonable level of economic security. Acting on the basis, the lower bound is $10 a day (in 2005 purchasing power terms) as the minimum income for a person to have the economic security in today's global economy, while the upper one determines at or below 95th percentile of the income distribution in their home country.

Yet, a $10 per day is low compared to the national poverty lines of OECD countries where poverty lines are defined in relative terms. ***Duflo (2007***) definition as those whose daily consumption per capita is between $2 and $4 or between $6 and $10, argue that middle class person is not an entrepreneur in waiting, but might run a business usually small not very profitable, having a steady well paid job is the key for better education and health caring that might lead to build their own carriers.

2.4 relative income-based definitions

Most of these studies rely on the median – but it suffers from the problem of different median in each country which means different middle class for each country. **Birdsall (2000)** defines the middle class those with incomes between 75% and 125% of the median**. Easterly (2001)** defines the "middle class" those lying between the 20th and 80th percentile on the consumption distribution, finds that a larger income share controlled by the middle three quintiles promotes economic growth, in fact the study has shown , that a higher share of incomes for middle class are empirically associated with higher growth, more education and favorable for development outcomes . **Ravallion** (**2009)** adopts a hybrid approach; it is absolute in applying it relative in its essence. Introducing the developing world's middle class is as those who are not "poor" by the standards of developing countries but are still poor by the standards of rich countries, Ravallion sets the lower bound by $2 a day at 2005 PPP. (The median of 70 national poverty lines), while the upper bound determined by $13 a day (USA poverty line). Ravallion presented that the developing world's middle class increased from 32.8 percent of the population in 1990 to 48.5 percent of the population in 2005. These figures suggest that more than 1.2 billion people joined the middle class over 1990–2005.

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Despite of the emphasis on the importance of having a large middle class for boosting the economic growth, increasing the consumption patterns or for its propensity to accumulate human and physical capital, moving towards democracy and the political stability. Yet, there no pure analytical comprehensive income threshold is satisfactory. More digging is needed to capture the comprehensive picture of this group.

3) Middle Class in Egypt (1990-2008)

Although the success of economic growth performance in Egypt in (2004-2010) there was a deep feeling of dissatisfaction was easily to spread among the whole class. Next section will try to find some answers due three folds; first: to take a quick glance both poverty and inequality aspects, then the size of MC at different cutoffs, measuring the wealth index during the last two decades, finally the median approach as a simple and understandable threshold of middle class in Egypt.

3.1 Poverty and inequality trends

Poverty remains a significant challenge in Egypt. Egypt's rate of absolute poverty which is defined as the percentage of the population living on less that PPP $1.25 per day, was 2 percent in 2000 and kept its steady rate till 2008, considered a better off situation than the 4 percent in 1990 as it is shown in table 2. Although the incidence of extreme poverty is fairly low, much of Egypt's population is still poor; 15 % of Egyptians lived on less than $2 PPP per day in 2008, the headcount poverty ratio under $2 was amounted to 22% in 1990 to get a sharp decline by the beginning of the 2000s.

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In 1999/2000, the poverty rate by national poverty line in Egypt reached the lowest rate by 16.7%, to increase during the next sub-periods, despite of the strong economic growth during the period 2005-2008. The implication of political changes made the situation of poverty get worse, as it soared to 26.3% under the national poverty line for FY 2012/2013 (Egyptian Ministry of planning data). Looking beyond the average in table 3- the period (1990-1995) has experienced an increase in the poverty severity measure from 0.14 to 0.44 while the poverty headcount declined indicating that those closest to the poverty line gained benefits from growth while the poorest did not. The FY2000 has experienced a big reduction across all three measures indicating that the poorest did relatively well from growth, unlike FY 2004 where the three measure were worse off. However, in 2008 the headcount declined while P_2 increased indicating that the poor have done proportionately better than the poorest in general.

Table (1) Trends of poverty and inequality

Indicator	1991	1995	2000	2005	2008
Poverty headcount ratio at $1.25 a day (PPP) (% of population)	4	2	2	2	2
Poverty headcount ratio at $2 a day (PPP) (% of population	28	26	19	18	15
Poverty headcount ratio at $2.5 a day (PPP) (% of population)	44	46	37	36	32
Poverty headcount ratio at national poverty line	24.18	19.4	16.7	19.6	22
GINI index		32	30.1	32.8	32.1	30.8
Palma Index		1.2601	1.1563	1.3231	1.2787	1.19417

Source: WDI 2013

Table 2 -Poverty class measures at $ 1.25

	Head count	Poverty Gap	Poverty Gap
2008	1.69	0.38	0.39
2004	1.99	0.39	0.16
2000	1.18	0.32	0.11
1995	2.46	0.34	0.44
1990	4.46	0.60	0.14

Source: *World Bank Povcal's data*

Inequality as measured by GINI coefficient- as a measure of inequality indicates an overall improvement in distribution of per capita expenditure in Egypt between 2000 and 2008 (down from 32.8 to 30.8), which more than offset a slight deterioration between 1996 and 2000 (up from 30.1 to 32.8), roughly speaking GINI for the last 25 years has shown a moderate trend, it moves up or down of 2 percentage points only. Also, Inequality can be traced by Palma index which consider a recent deciles ratio that tackling the tails of distribution. Palma is the ratio of income share of the top 10% to the poorest 40% of population, it measures the how much the rich earn relative to the poor, and the high value of Palma indicates that poor much increase their income share or reducing the share of the rich within the followed government's policies. Palma index was about 1.2601 in 1990 to get a sluggish improvement by 2008 declined to 1. 19417.As shown in **figure (1)** the distribution of consumption expenditure by quintile that changes over the five dates (1990, 1995, 2000, 2005 and 2008) have been marginal across all deciles over time. However, over (2000-2008) the share of the bottom 20 percent remained almost unchanged, the richest deciles' share increased by (1.04 percentage points), while the shares of all other deciles increased only marginally.

Worth noting that income distribution during the 5 waves from (1990-2008) did not fluctuate dramatically to cope with the volatility of the economic growth as it was presented in graph (1).

Figure (1) Distribution of income or consumption by quintile
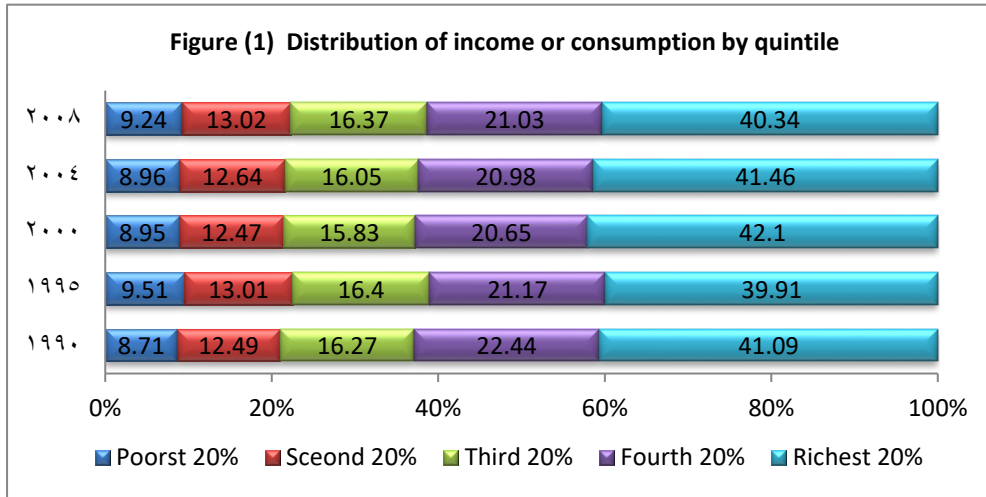
Source: www.worldbank.org

3.2 The size of middle class in Egypt

According to **Easterly (2001)** there is a strong association between solid middle class and higher income, more education, better health outcomes and faster upward mobility. However, that was not the scene of the Egyptian middle class as it will be presented in the next points.

Table (3) shows the main results for the five methods for some relative and absolute definitions of MC that were discussed earlier in the first part of the study. The first result is that these definitions imply widely varying size of middle class dramatically.

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Starting with the absolute results except Homi's ($100-$10), appear to display a stable strong middle class, to amount 85% whether using Ravallion's or ADB lines, a little shrinking   if following Ghadir (2009) methodology (NPL-$13). Taken into consideration that these results hide the large bulk of poverty rate under the upper lines whether using $10, $13, $20 and $100**.** Then moving to the measures based on relative approach shows a glaring heterogeneity, if deploying Brisall (2007) by excluding the richest decile as the upper line while a $10 is lower one, striking results there is **NO** middle class in Egypt it falls to Zero. Bridsall considers $ 10 is the minimum secure line of middle class. Whilst Easterly's methodology reveals a quite reasonable size of middle-class amount to 40% of the population.

Table (3)   the Size of Middle Class in Egypt

survey year	($13-$2)	($10-$2)	($20-$2)	($13-NPL)	($100-$10)	(90th -$10)	(1.25 m-0.75m)
1990	72.09	70.98	72.89	77.25	2.3	0	38.9
1995	73.81	72.93	74.43	79.62	1.9	0	42.88
2000	80.24	79.01	81.11	82.26	2.6	0	41.19
2004	81.1	79.88	81.96	80.06	2.6	0	41.45
2008	84.17	83.01	84.96	76.78	2.4	0	43.57

Source: *Author's calculation – Povcal data bank.*

3.3 Using the median to measure the middle class in Egypt

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The study proposes a new threshold that might help to size the middle class in realistic view. Taking the median as the lower line while the upper line excludes the richest 10%, the method is following Bridsall's methodology . Using the median as   the decline of absolute and extreme poverty, the median would be a reasonable line, it would reflect the fact that growth is shared with the households. the Another reason   is the growth of the median would be so close to the growth of the poorest 40% (Birdsall 2013). Finally, as table 4 shows, the population size between the national poverty line and the median is considered a large bulk, which contradicts with the usual wisdom that the person who just crosses the poverty line can be considered a middle class, so subtracting the bulk of population under the median line can capture another narrative of middle class. Taking Ravallion's upper line which is a $13 is very high line in the Egyptians this means that almost 99% of population under this line will be poor, it would be unrealistic line. Unlike what absolute measure came out with of how stable and strong size of middle-class Egypt has for the five periods, the middle class according to the new lines have shrunk during the period of high economic growth rate. It shrinks from almost 40% to 35% in a period which is highly pro-poor growth as it will illustrate in the next section. That might help to explain the dissatisfaction   in the years of highly economic growth.

Table (4)   the size of middle class using the median approach

survey year	($13-m)	(m-NPL)	(90th-m)
1990	48.53	28.72	39.72
1995	48.9	30.72	39.88
2000	48.19	34.07	39.53
2004	48.22	31.84	39.56
2008	43.78	**33**	35

Source: Author's calculation

4. Was growth pro-poor in Egypt so it was enlarging the middle class?

The fact that achieving pro-poor growth would lead to poverty decrease, then a larger middle class size. But, was that the actual path of the Egyptian's case? generally speaking pro-poor growth is the economic growth that is favorable to the poor. But the term favorable differ from one view to another. While one view focuses on the poverty reductions in absolute term, other alternative concentrates on the distributional changes

Measuring Pro-Poor Growth

The research relies on an empirical tool that uses Distributive Analysis SATA Package DASP, which provide the results of three main indices of PPG. The method introduces a complementary and consistently measures of PPG with the Growth Incidence Curve (GIC) from the Household survey. Taking into consideration data limitation to use the Household surveys due to the Egyptian government restrictions policy. The author used the grouped data from the Povcal data bank to calculate the indices.

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The study develops the measures of PPG that uses grouped data of world bank Povcal data. It differs from the work of El-Laithy et al (2011) or (2008.The research covers the five waves (1990-2008) using both the grouped povcal data.

The three main indices of PPG using DASP program. A brief review of indices is presented in Appendix 1. In   Table 5 the shows at poverty line $38, poverty measure of H_o where α =0, during the period (1990-1995) growth was pro-poor for only two indices except for K&S (2000). This economic phase was marked by stabilization program. Also, this period was accompanied by a significant decline in all poverty measures. Although inequality declined, but the household final consumption expenditure annual growth declines to 2.44% in 1995 from 3.7 % in 1990. It means that the poorest people have not benefited from the economic growth. This could be the only explanations to K&S 2000 index of anti-pro-poor growth. For the period (1995 - 2005) the growth was anti pro-poor for the two sub-periods. There was a change in the pattern of expenditure distribution, with an increase in poverty measures. Inequality increased by 2%. For the period (2004-2008) growth was pro-poor. Which means economic growth still the main trigger for any reduction in both poverty and inequality in Egypt.

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Table (5) Pro-poor growth indices (1990-2008) Poverty line =38 α = 0

Indices Estimate	1990-1995	1995-2000	2000-2005	2004 -2008
Growth Rate(g)	-0.030135	0.146668	0.002852	0.013421
Ravallion & Chen (2003) index	0.116517	0.043268	-0.018977	0.022711
Ravallion & Chen (2003) - g	0.146652	-0.103400	-0.021829	0.009290
	Pro-poor	*Anti-poor poor*	*Anti-poor poor*	*Pro-poor*
Kakwani & Pernia (2000) index	-3.142857	0.500000	-34665648.393	3.000000
	Anti-Pro- poor	*Moderate -poor poor*	*Anti-Po-poor*	*High Pro-poor*
PEGR index	0.094709	0.073334	-98877.090693	0.040263
PEGR – g	0.124844	-0.073334	-98877.093545	0.026842
	Pro- poor	*Anti-poor poor*	*Anti-Pro- poor*	*Pro- poor*

Source: Author's calculations

Table (6) Pro-poor growth indices (1990-2008) Poverty line =60 α = 0

Indices Estimate	1990-1995	1995-2000	2000-2005	2004 -2008
Growth Rate(g)	-0.030135	0.146668	0.002852	0.013421
Ravallion & Chen (2003) index	0.058390	0.063223	0.000540	0.035797
Ravallion & Chen (2003) -g	0.088525	-0.083445	-0.002312	0.022376
	Pro-poor	*Anti-pro-poor*	*Anti-pro-poor*	*Pro-poor*
Kakwani & Pernia (2000) index	-0.250000	0.650000	3.500001	3.333333
	Anti-pro-poor	*Moderate -pro-poor*	*High Pro-poor*	*High Pro-poor*
PEGR index	0.034897	0.007027	0.005987	0.012582
PEGR – g	0.035940	0.007571	0.005987	0.012534
	Pro-poor	*Pro-poor*	*Pro-poor*	*Pro-poor*

Source: Author's calculations

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Conclusion

The empirical results for absolute –thresholds definition indicate that the size of middle class in Egypt has been increased during 1990-2008. While the relative –thresholds definition may have another view, it indicates that the size of MC is not that bulging rather it is shrinking. The study presents a new threshold based on the median as a lower threshold as the size of population who lies between the national poverty line and median is about 33% of the population, those who are conventionally called middle class. The research finds out that Egypt's growth was pro-poor in only two sub-periods. However, Egypt succussed in achieving a reasonable poverty reduction during the growth booming period, inequality was moderate. However, despite the fluctuation of the economic growth, growth was pro-poor growth in two periods. Middle class is the backbone e of the society, which means a deep further study of income and social factors of this class. Moving from income –based threshold to other aspects especially after the economics -political changes.

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Appendix

1- Ravallion and Chen index (2003)

$$\text{Index} = W_1(z)-W_2(z)/ F_1(z)$$

Where W_D is the Watts index for the distribution $D \in [1, 2]$, $F_1(z)$ is the headcount poverty for index of the initial distribution. Which means if the index –g is positive, then this period is pro-poor growth as it presents in table 6and 7.

2- PEGR Index: Kakwani, Khandker, and Son (2003)

$$\textbf{Index} = \quad \boldsymbol{g} * \left(\frac{P_2(y^2,z,\propto) - P_1(y^1,z,\propto)}{\left(P_1(\frac{\mu 2}{\mu 1}),\ z,\ \propto\right)\ -P_1((y^1,z,\propto)} \right)$$

If this exceeds the growth rate g, the actual growth rate, the growth is judged pro-poor (with the relative statement).

3- The Kakwani and Pernia pro-poor index (2000):

Kakwani and Pernia consider that growth is pro-poor when the poor receive the benefits of growth proportionately than the non-poor. PPGI shows the ratio of elasticity for total poverty reduction in case of distribution neutral growth. This ratio will be greater than one when growth is pro-poor.

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الطبقة الوسطى والنمو في مصر (٢٠٠٨-١٩٩٠)

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الملخص باللغة العربية

تسعى الدراسة إلى تتبع العلاقة المفقودة بين الطبقة الوسطى والنمو في مصر. حيث تحاول الدراسة رصد ما إذا كان توزيع الدخل في صالح الفقراء في فترة ما قبل الربيع العربي. استنادًا إلى منهجية Ravallion and Chen (٢٠٠٣) و Kakwani and Pernia (٢٠٠٠) و Kakwani (٢٠٠٣) باستخدام بيانات دخل مجمعة، حيث يتم استخدام ثلاث مؤشرات لاختبار ما إذا كانت التغييرات التوزيعية للدخل بالفعل لصالح الفقراء خلال الفترة (١٩٩٠ـ٢٠٠٨)، والتي يجب أن تكون بالتبعية مرتبطة بحجم الطبقة الوسطى، ويخلص البحث إلى أن حجم الطبقة الوسطى قد تضخم خلال فترة الدراسة حتى لو لم يكن النمو في صالح الفقراء.

الكلمات الدالة: النمو الاقتصادي، النمو المحابي للفقراء، الطبقة الوسطى