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Employment in Agriculture in Romania – state of play (subsistence agriculture) and its perspectives (e.g.: green farming)[1]

Introduction

A few years ago, in 2005 the author of this paper has released another material into the body of which he was trying at least to make a strong argument in favor of agriculture as Romania's first and foremost industry and driver of sustainable growth. The boom years which were the feature of most of this decade were hovering round their zenith, construction and real estate were in an upsurge and it seemed as high-tech and other less technology intensive services were poised so as to take the shine from everything else. Therefore although the paper has been well received and it stirred a substantial debate, the final word was that nobody would have really risked advising the Romanian government a "return" to agriculture.

However years have passed, Romanian has achieved its cherished political aim of full EU-accession but in the meantime, just barely two years after, a tremendous exogenous shock shattered the world economy, gripping in its claws a fragile small and far too open emergent market. Prices of assets have tumbled leaving both business and households with huge burden of liabilities, investors, before so eager to commit themselves to the so-called fast-growing sectors (agriculture not chief amongst them of course), have begun fretting and thus pushed the country back into the last-resort arms of the IMF and in the end everybody remembered agriculture.

Romanian has indeed managed to get its way through and obtain in the new Barosso Commission the important portfolio of agriculture. While this of course vindicates our initial position almost five years ago it also points to an undeniable market reality. No matter how much in terms of profit some synthetic, sophisticated assets might bring into the short term, getting into the ever valid Keynesian statement which points to the fact that key to economic development is to maximize the length of periods of growth and prosperity, is asking from us all for a perpetual revisiting or return, to the fundamentals. In other words to those underlying assets, sometimes or in most times actually based on staples, on goods and services for which the demand is and will be perpetual and which are thus, less volatile. Agriculture serves host and source of many such underlying assets and it is precisely because of it, that prices of agricultural stapes have been floundering far less even during the current and unfortunately still unfolding world economic depression.

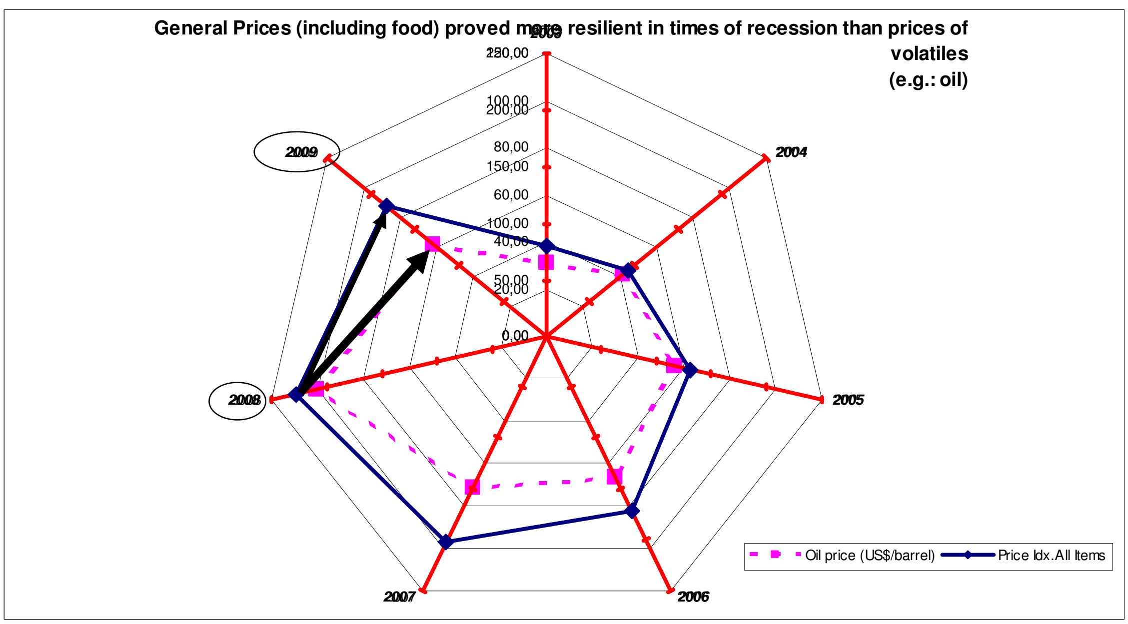
It is therefore precisely for these reasons that, at the request of the country desk and in the same generous frame of the EEO which has made possible the elaboration of the first paper on agriculture and its related human reservoir in 2005, that we are undertaking now this endeavor which we hope the reader will find insightful, useful and even maybe action-enticing.

[1] The following acronyms will be more frequently used in this paper, especially as regards graphs and charts:
NIS – The National Institute of Statistics of Romania;
NBR – The National Bank of Romania;
EIS – "The Economist Intelligence Unit" (a sister entity of *The Economist* magazine)

1. Revisiting the fundamentals – Agriculture and its role as economic stabilizer

Agriculture at its simples is about staples. What agriculture produces is aimed at fulfilling basic needs which every human being has and moreover has to sustain on what is a daily basis. In a society where mass production is the rule and therefore mass consumption comes not as vice, as some are again tempted to believe thereby willing perhaps to turn us back into the pre-history of economic thinking, but as a necessity and an expression of justified self-interest, prices of such staples will tend to be rather stable. It is true that such stability might come at the cost of down-leveling and therefore the loss of investors' appetite but, as said before, what is important when dealing with the inevitable cycles of the economy is not to achieve once an overall peak but to maximize the length of periods when even at sometimes dismal rates, the economy keeps growing thus keeping an incentive for consumption and therefore production. Moreover, staples play an important role in hedging against what we know as depression or balance-sheet recession as some scholars like to call it nowadays. This fourth and dangerously mysterious phase of the cycle generally reverses the very logic of economic operators. Maximizing benefits no longer stands as rule. What replaces it thoroughly is the minimization of debt. In such circumstances staples serve as a shield as they are the very expression of "bare necessities". Therefore investing in agriculture and reducing by such shrewd investment the intrinsic vulnerability of agriculture to what are non-human generated random exogenous shocks (i.e.: natural disasters such as drought, floods or others from the same bulk) hedges the general economy against the more potent human-generated random exogenous shocks, with THE CRISIS being one of them. Into this regard it can serve as one of the main drivers of what we generally call sustainable growth or in other words that type of growth which while not being immune to cycles, nonetheless manages to down-smooth them substantially.

Chart no.1

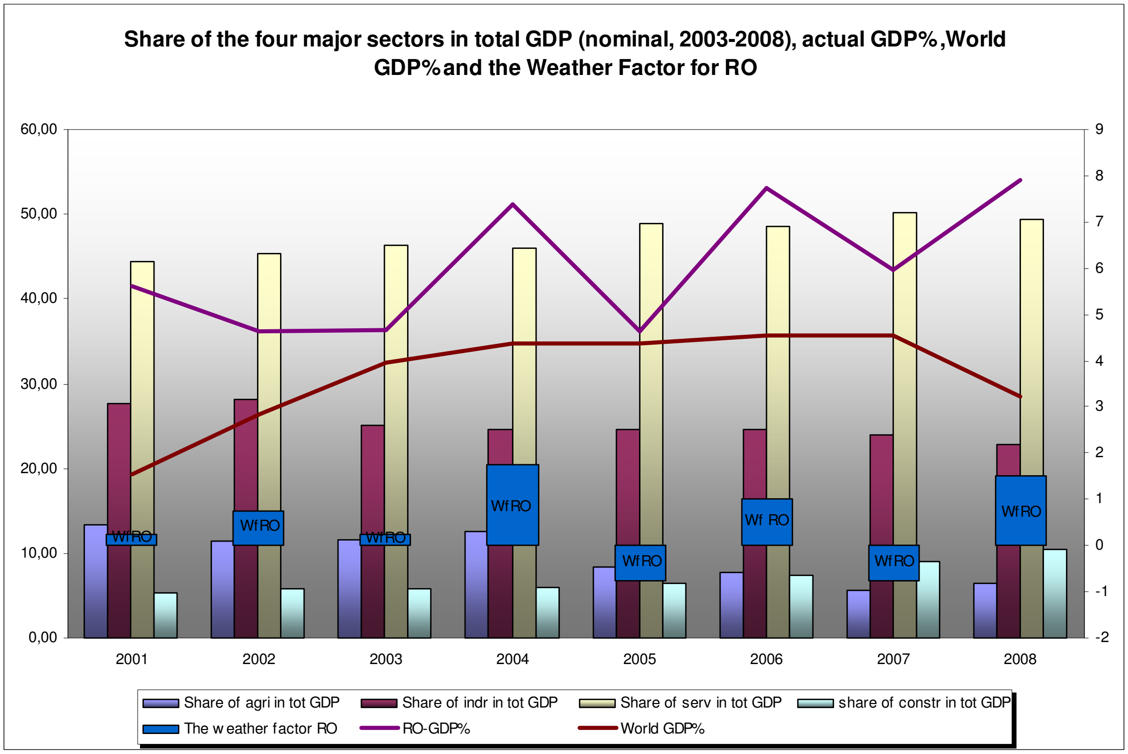


Source: NIS & EIS data plus the calculations of Dr. Catalin Ghinararu;

This being the theoretic rationality, practice however rarely matches it and the Romanian case it thus no-different. Throughout the last decade, the share of agriculture in total nominal GDP has been steadily on the fall. Treated as a genuine Cinderella of the economy, it has struggled to cope with shocks such as the massive floods of the summer of 2005 or the scorching heat of 2007's summer months. While some were clamoring high that we should not be worrying as the tertiary and not the primary sector of the economy are the future, the reality looked quite different. In 2005 for example, while the world economy was in full swing and prices of such commodities like crude oil were still at low-levels compared with today, the Romanian economy dived from an 8% GDP growth in the 12 months to the 4th quarter of 2004 to almost half of this rate in the 12 months to the same period of 2005. This happened amid an unprecedented fiscal relaxation entailed by the adoption of the 16% flat rate income tax and while an appreciating currency was giving boost to what was until then not a very buoyant domestic demand. However, as floods in mid-summer dampened the fields and turned vineyards to rot, none of the growth-boosters above was able to compensate. This shows on the one hand the power of exogenous shocks but on the other hand serves as case in point to the importance of agriculture as well as to the fact that currently statistics fails in capturing to its full the real contribution of agriculture (most if it undertaken in household production for its own final consumption farms) to GDP formation. This squarely means that if taking into account just the nominal share of agriculture in total Gross Value Added (GDP's main component when computing the aggregate using production method) then the fact that floods have wreaked such havoc on crops should not have had such an impact upon the final output. However the simple fact that weather conditions (which we have captured hereby through an imperfect though worth taking into account "weather conditions RO-index[2]) shifting so dramatically from one year to another have as in a tandem led to a shift of GDP growth rates, halving them when all other factors have either remained constant or else even dramatically improved, comes in support of our hypothesis which postulates that, by mid-decade at least, agriculture was counting for far more of the gross output than statistics was able to reveal.

[2] The weather conditions RO-index is a synthetic, normative type measure created by us so as to capture the prevalent weather conditions on a quarterly basis; It uses a simple scale ranging from the value of "-2", to the value of "+2", as follows: (-2) stands for highly adverse conditions, (-1) for adverse conditions, 0 for fair or equal/neutral conditions, 1 for favorable conditions and ubiquitously enough +2 for highly favorable ones. While calculations have shown that to a certain degree the scale is a little bit too rough, nonetheless, in some regression s performed it has proven among the variables explaining GDP growth while in the meantime doing it in a statistically significant manner. Therefore we have opted to use it for this paper, in spite of its inevitable shortcomings, which we do hope in future to improve; Any suggestion is in this respect welcome;

Chart no.2



Source: NIS data plus the calculations of Dr. Catalin Ghinararu;

Nevertheless, it seems to us that the exogenous shock of the floods has failed to move political decision-makers so as to direct more of the resources into mitigating the impact of weather conditions and thus increasing the hedge of staple production and this, in spite of ever more signs that the growth trend, while of course genuine and beneficial, was proceeding on, and from, shaky grounds.

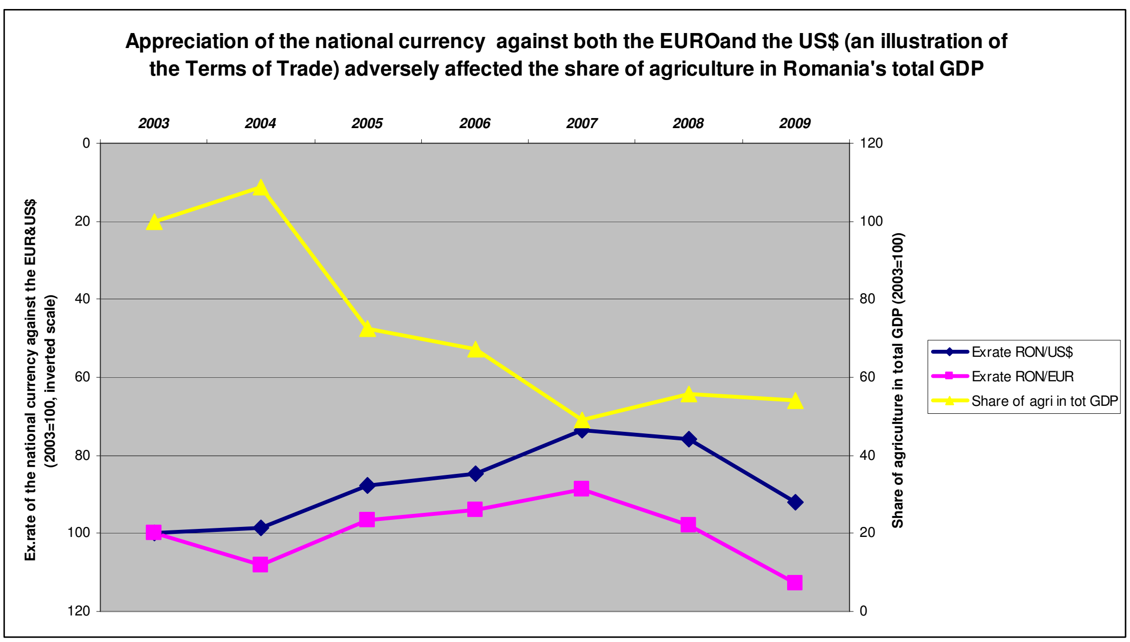
The failure to direct at least part of the significant flows of FDI that started entering the domestic market with the advent of the new century meant actually that agriculture was left to the mercy of the weather factor and thus it ceased to matter practically in GDP formation which has further induced vulnerability into the broader economy. If we recall our exercise in the first paper written five years ago, we do then have to go back to some concepts related to the exchange rates. We were talking there about the fundamental and behavioral exchange rates and from these very concepts we were deriving the fundamental and the behavioral shares of agriculture in total employment. Now what if, thinking about exchange rates and FDIs we would attempt a far much closer look at the effects of the exchange rates, as the main channel through which economies communicate with the wider markets, on the share of agriculture in total employment as well as on the structure of employment in Romania, with regards of course to the shares of its three major sectors (i.e.: agriculture, industry, services).

Making yet again a little bit of flash-back we have to remember that the gradual opening of the Romanian economy, which occurred during the nineties and the early years of this decade, took place against a background of intense industrial restructuring which literally wiped-out almost entirely the vastly inefficient enterprise base which was left as legacy of more than four decades of central planning. In the meantime, an aggressive and all-too-justified (i.e.: read BENEFICIAL) process of restitution of properties took place in agriculture. While both of the processes were in and by themselves beneficial they have reduced the degree of concentration in the Romanian economy to almost nil. Coupled with the scarcity of capital this has opened wide all floodgates for the entry of foreign capital, though mostly this was true for industry and services and only adversely affected agriculture. By this we mean that in terms of inputs of new technology, methods of organization and the opening of new markets, access to the capital ones included, the massive entry of foreign capital was more than beneficial. However, there is no benefit without cost and of course nor should it be! The cost has been, as it is now made evident by the crisis, an increased dependence of the economy on flows from the outside which, obvious enough, heightened its vulnerability to random exogenous shocks. In fact a multiple regression that we have run in the frame of our MITGEM Model[3] has shown that out of more than 18 variables employed to explain GDP% for the last 24-26 quarters in a row (2003-2009, Q1.), the one which most explains quarterly variations of gross output on the year early and practically the only one statistically significant is actually World GDP Growth (alone it explains around 77% of GDP quarterly variations on the year early).This in turn means only one thing. The Romanian economy has not only transformed itself from a planned into a an emergent market one but, due to the contextual peculiarities during which this epic process of transformation took place, it has also become, alongside with most of its siblings in the CEE region, a very open and most unfortunately it seems, a very vulnerable one. If we do hold this prerequisite as correct and it is likely that this should be the case given the results we have obtained via the multiple regression mentioned before then, it is also likely that the variations of the exchange rate, which we will use as a proxy to illustrate the influence of global market evolutions on the Romanian economy and labor market (agriculture of course included), must have mattered a lot. And indeed they mattered. Anyone familiar with the intricacies of statistics knows that indicators expressed as ratios count as more than powerful explanatory variables as they tend to indicate the intensity of a certain phenomenon. When the ratio is a ratio of prices as exchange rates are, this is even more the case. Moreover, when we do compute a *ratio of ratios* as we did now by creating a synthetic “exchange rate ratio”, dividing the exchange rate RON/EUR by the exchange rate RON/US$, we are likely to obtain a highly powerful explanatory variable. We have chosen therefore to apply the power of this variable, which thus can serve not only as proxy for the influence of foreign markets but also as proxy for the competitive advantages of the Romanian economy vis-à-vis world markets, on the variable upon which it should have exerted the bulk of its influence and that is labor productivity expressed classically as GDP/worker (in our case occupied/employed person, farmers included). Therefore we have tested and seen via a series of single variable regressions that the calculated exchange rate ratio does explains more than 80% of labor productivity (GDP/w) variations for the last 24-26 quarters in a row, that is from Q1.2003 to Q1 of 2009. More important, variations of this synthetic ratio, when taking its Q1.2003 levels as 100, help explain also more than 80% of variations of the same measure of labor productivity when we take its Q1.2003 level as a base (=100). In other words, via a very simple test we have demonstrated the sheer impact of foreign flows of capital, as captured by the movement of the exchange rates which they do influence and which, does at its own turn, influence labor productivity. This, further points to the common truth of FDIs acting as the main driver behind productivity gains across the NMS, Romania of course included. However and that goes both jointly as well as a consequence of the above as the two cannot be actually completely separated (the whole of the process is much too recent to benefit from an exhaustive assessment) exchange rates also do influence directly the shares of the three sectors in total employment. If we would look at the way the share of each of the three major sectors has evolved during most of this first decade of the 21st century then we would see that the evolution, or the dynamics, of the shares

[3] Basically an I/O model used also for the current products of the EEO and developed at the National Labour Research Institute of Romania by Dr. Catalin Ghinararu;

in total employment of two major sectors, and these are maybe not surprisingly agriculture and services, is more than convincingly explained by the very dynamics of this composite variable which we have designated as the "exchange rate ratio". The only sector which does not get a convincing explanation for the dynamics of its own share in total employment remains industry. It is thus obvious the that terms of trade captured by our composite variable of the exchange rate ratio are the driving force pushing actually the re-adjustment of the Romanian economy and that their force is being felt via the sectors that are most vulnerable to them. Services go first and foremost as they are the most portable and agriculture goes second because simply no significant investment flow has been directed towards it and thus it is wholly vulnerable. This is what actually explains both the dwindling share of agriculture in total employment as well as the submergence of its contribution to GVA formation. The evolution of the terms of trade (i.e.: in this case squarely the appreciation of the national currency for almost the whole of the interval between Q.2003 –Q1.2009 safe for its commencement and termination ends) which has made it more attractive for investment to go into services and far more easy to import than to produce food staples, has practically made agriculture and its associated employment vulnerable to the vagaries of the terms of trade and this in spite of the fact that large swathes of the Romanian agriculture still roam into what is household production for its own final consumption. This also explains why, although actually under such an influence from the terms of trade, the overall share of agriculture in total employment has suffered only what we can call a gentle downslide and did not experience the nosedive many would have expected. The terms of trade prevailing for most of the period in analysis have therefore been NOT particularly conducive for the sort of investment agriculture needs and that is in most cases the type we call "sinking investment" (roughly of the type that we can see going on for basic infrastructure like railroads, ports, dams, roads etc) but instead for the type of more portable, easy-going, if not completely speculative investment (we employ here the term speculative not in its capital markets meaning but in a rather more so to say broad meaning).

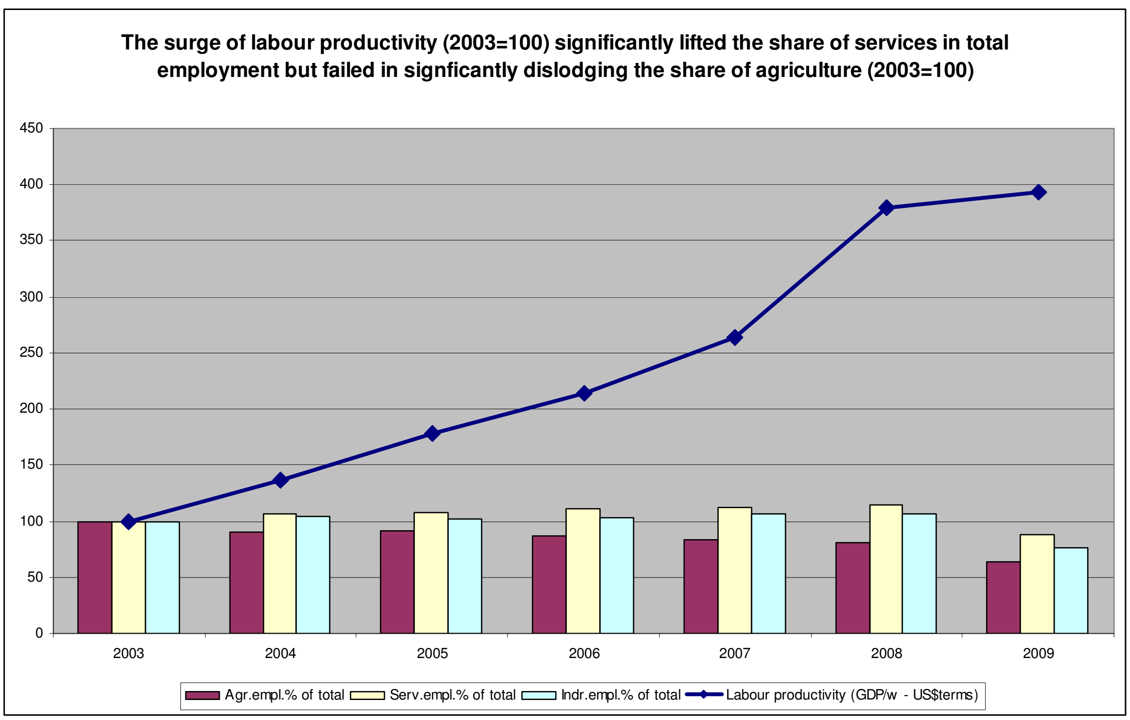
Chart no.3



Source: NIS data plus the calculations of Dr. Catalin Ghinararu;

This fully explains why agriculture has witnessed the full impact of the prevailing terms of trade practically in what is its contribution to GVA formation wherefrom, it has simply vanished altogether and this in spite of the fact that, roughly speaking, the number of years featuring favorable weather conditions (2004, 2006,) has been equal with the number of years featuring adverse conditions (2005, 2007) and maybe not surprisingly with the ones featuring fair/neutral weather conditions (2003, 2009) (i.e.: strong argument here for those which, including the author of this paper, tend to seriously doubt "climate change"). Also, this explains actually why in the meantime, while losing ground massive on the GVA "front" agriculture has retained such an ample part of the labor supply in terms of its share in total employment (while of course declining this still remains close to the 30% limit where we left it five years ago, at the time when our first paper dealing with the issue appeared). In practical terms, this points to one and only one thing. **The terms of trade as they have been, have not the least favored "sinking investment" and especially the kind of sinking investment of which agriculture and farmers are in dire need.** Whatever gain of productivity from the more than significant flow of FDI the Romanian economy has received during the last 26 quarters went into services and partly into industry (the sector where the share of employment appears as the most insulated from the terms of trade as we have chosen to express them but, which can be either because the massive restructuring period lies behind our analysis period or, because our series fails to go far enough into the current crisis period, where industrial employment has been he hardest hit by far) with **only breadcrumbs reaching agriculture**.

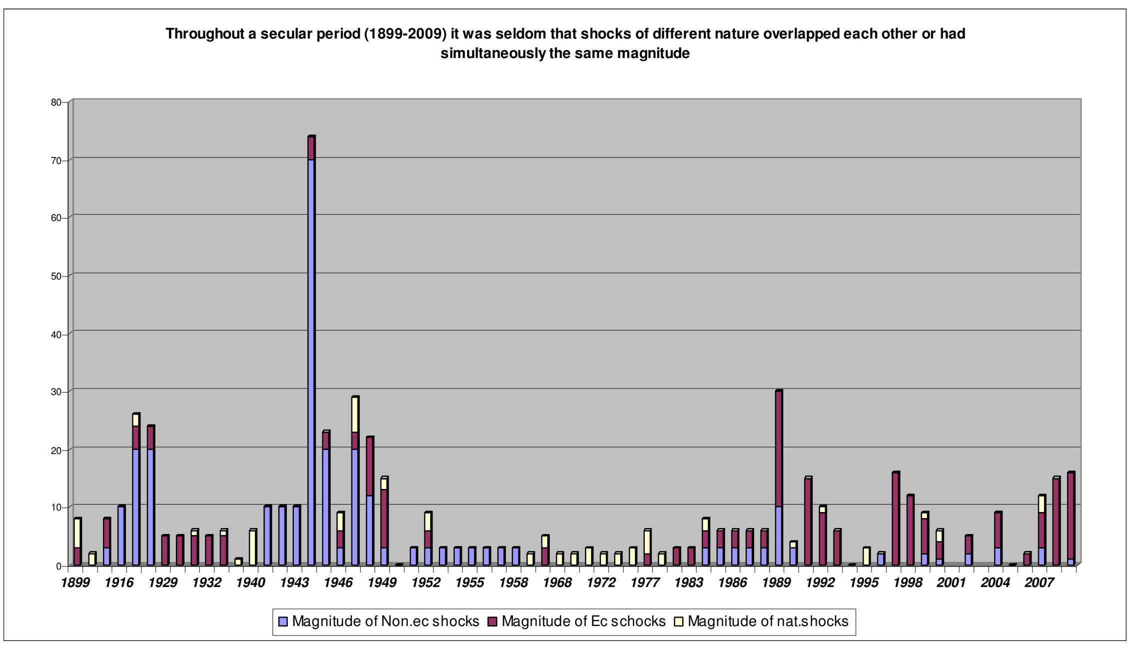
Chart no.4



Source: NIS data plus calculations of Dr.Catalin Ghinararu;

This fully accounts for the picture of a sector which, while retaining a hefty share of the total employment simply drops off the chart when coming to GVA formation. This also flaws the argument made even recently that agriculture receives too much from the EU financial assistance flowing to Romanian in the shape of cohesion and structural instruments[4]. In fact agriculture receives far too little and has started receiving for far too short. **If significant flows would have been reaching agriculture for the last 25 quarters in a row, even given the same terms of trade, its share in total employment, about which far too many and far too unwisely still complain, would have been now a full 4 (four) percentage points lower (!) than it actually is.** It would have thus released more of its workforce into the other sectors of the economy and thus it might have made an importance difference with respect to salaries and productivity. It might have been and we do allow ourselves to a little bit more than a mere speculation, given the regular analyses we are performing, including in the frame of the EEO, on the movement of these two variables (i.e.: labor productivity and wages) that if such a thing would have occurred, the three to five quarters in 2007-08 when then overall movement of wages has slightly outpaced the rise in labor productivity might have been as well avoided. Moving ahead with this it might have been as such that, the dangerous overheating which prompted so much fear and dented to such an extent the credibility of the country's economy in the eyes of the investors might have been lesser and accordingly the slump into recession possibly milder. Of course we cannot and we will not go the lengths of saying that more investment in agriculture would have given Romania the chance of narrowly avoiding full recession thus emulating the case of Poland (where it might be that agriculture could have played a role though this is not entirely clear) but we will allow us some commentaries basing on long-term historical records.

Chart no.5



Source: Statistical data base on Random Exogenous Shocks for RO (1459-2009) constructed by Dr. Catalin Ghinararu (see also Bibliographical note);

These records show that very seldom random exogenous shocks having different types of causes (i.e.: human economic, human non-economic and natural or without any human-related cause) overlap each other. Moreover, the event of the so-called depression or balance-

[4] See a recent paper signed by M.Panaite for the C.R.P.E. think-tank and which again brandishes agriculture as a sector of passé.

sheet recession, such as the one battering the world economy nowadays and which accounts as the most severe type of random exogenous shocks with human-related, economic causes at its roots, only occurs once in probably more than one generational period. Therefore as historical records from ordinary recessions during the last half of the 19^{th} century and first decade of the 20^{th} century (the so-called "first era of Globalization") show, whenever, crisis generated solely by natural shocks occurred (droughts – e.g.: the great drought of 1899, 10 successive months of drought in what was then the Kingdom of RO.), they were relatively easily traversed by resorting to classical monetary tools. However, when a more sophisticated in nature shock occurred (e.g.: the panic of 1907 originating in the USA, now commonly considered as preview to the great crash of 1929) they were more difficult to overcome and even in an economy that was less sophisticated than today, monetary tools solely were proving themselves powerless. But what stands more to our argument is that in such cases, and again here we will refer to the "panic of 1907" which, fact less known, had its impact on Romania's economy, the salvation came not from the resort to monetary stimulus, even in what we would call now "innovative approaches" but from the fact that both the harvests of 1905 and 1906 have been abundant and thus have shielded the economy and maintained its terms of trade in spite of the global turmoil. In other words, the very fact that agriculture produces staples, provides a powerful shield in times of volatility, it actually down-smoothens the inherent vagaries of the market and provides that type of addition monetary measure need in order to properly fight human-generated, economic in nature random exogenous shocks.

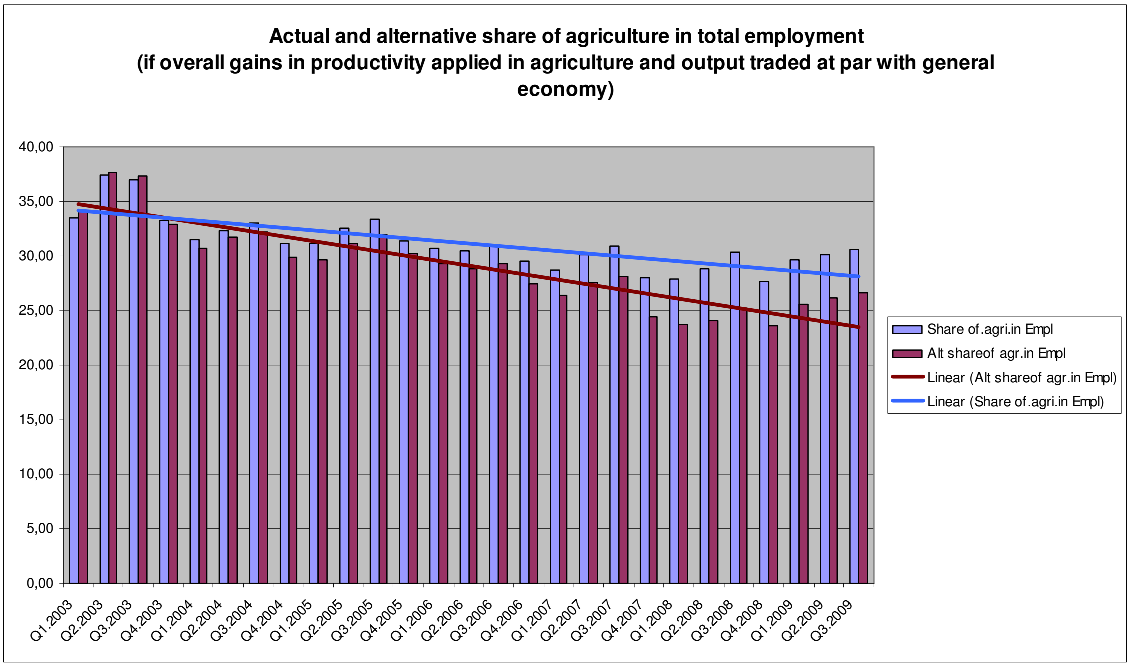
2. Making Agriculture the Pillar of Rural Investment– Would it Worth the Price?

The argument we have made above clearly shows the importance of agriculture as shield against the ruthlessness of markets. However, it does not provide sufficient evidence that actually an investment in agriculture, which mostly would have to be in the form of sinking investment and therefore expensive, would necessarily bring about a more sustainable, less cycle prone growth for Romania. This is of course difficult to prove but we will nevertheless try by going here a little bit counterfactual and trying to assess what might have happened if at least a more significant part of the gains in productivity that accrued to the Romanian economy during the current decade (or at least for the largest part of it as pictured in our analysis going from Q1.2003 to Q1.2009) would have gone into agriculture and thus into the improvement of its associated workforce. Maybe, we think and we would attempt to demonstrate, things could have been different, not the least with regard to the current drastic recession.

In order to do this we will be looking first and foremost to our synthetic measure of the weather factor. As we previously said this measure shows us clearly that throughout the period under scrutiny an equal number of favorable, unfavorable and rather so-to-say neutral or fair years have succeeded one another thus inducing an inherent fluctuation in the overall output of agriculture. However, starting from 2004, a year which has seen not only an exceptional rate of growth of the economy but also exceptional weather conditions, the contribution of the sector (i.e.: agriculture) to overall output has simply entered free fall and irrespective of favorable years alternating with less favorable or sometimes adverse years. This only serves as to re-enforce our point summarized above that, it was in fact none of the fundamentals that hampered Romanian agriculture and inhibited its contribution to GDP formation but, rather the sheer neglect as well as the more than incomprehensible lack of action of Governments in office following the autumn of 2004 election which, the introduction of the flat-rate income tax apart, have seemed rather more than inept both in harnessing the yields of what was an exceptional period of growth as well as in foreseeing the incoming storm of the depression, with the latter all too visible by the end of 2007.

Having said this as starting point and taking into account the fact that weather conditions have not been at play so as to as hamper growth, we will turn ourselves to the determinant factor of productivity, in itself an unmistakable witness of investment in a particular activity, branch, sector or a national economy as a whole. We have from this point of view seen quite clear that if, the share of agriculture in total employment would have been following the productivity gains in the broader national economy or if in other words the sector would have benefited from productivity gains at least at the average of the national economy, by now it should have been squarely 4 pp. lower than it is.

Chart no.6



Source: NIS data plus calculations of Dr. Catalin Ghinararu;

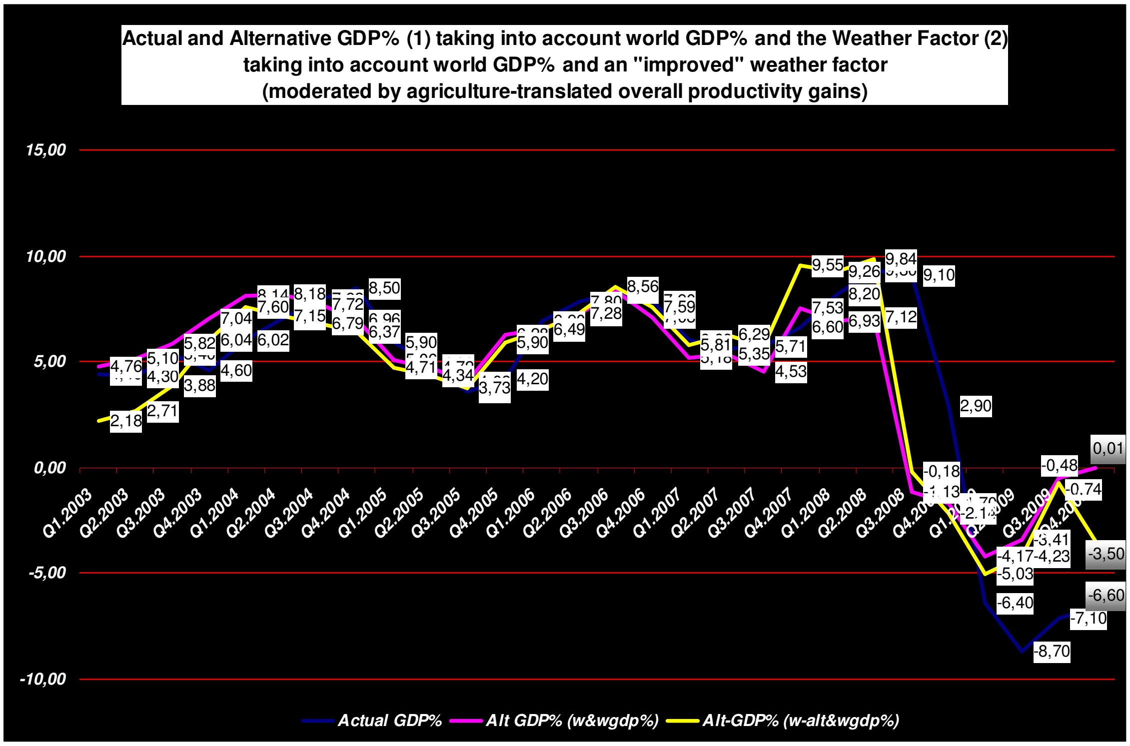
As such we can consider that the labor shedding resulting would have signaled an improvement in labor productivity in the sector as a whole and thus it would have meant an advancement of techniques of production and methods of work that would have been able to compensate, partly of course, but nonetheless compensate, for the vagaries induced by the normal alternation of weather conditions. From here on practically, our hypothesis would be that, each fraction of pp. or each pp. of share in total employment that agriculture has preserved starting from 2003 onwards, marks practically a loss in terms or labor productivity which at its turn, would have alleviated the impact of weather conditions and what is more, would have either maintained or even increased its contribution to GDP formation throughout the period under analysis. Taking these into account, we are not only able to compute an alternative series of the share of agriculture in total employment, in accordance with the gains of productivity in the overall economy, gains which once again in the factual reality agriculture has missed, but, we can assume that each missed gain can be added as an "improvement" to the weather conditions as quantified by us with the help of our "weather conditions index". By adding this fraction we will come out with a new series of the "weather factor" or the "weather conditions index" which we would call the "**improved weather**

conditions index" or the "improved weather factor". In other words, what would have been if productivity gains for the whole of the economy, at least at their average, would have been replicated in agriculture thus not only resulting in a release of labor supply but, also in an alleviation of fluctuations induced by "actual" or REAL weather conditions thereby contributing to an upkeep in the sector's output and ultimately contribution to overall output formation (i.e.: GDP).

Going one more final step further from here and remembering our regression having GDP% as dependent variable and both the weather factor as well as World GDP% as main and only significantly statistic explanatory variables, we will input the thus newly calculated "improved weather factor"/"improved weather conditions index" into the overall relation. What results is more than surprising although, it probably shouldn't. The newly calculated series of GDP% for the period between Q1.2003 and Q1.2009 clearly points to a more amenable trajectory of GDP% whereby the bouts and troughs are smoothed and what is more, the recession is, if not avoided, though under one of the scenarios (the one in which the only factors determining GDP% would be World GDP% and the weather factor – valid only as theory we would believe)[5] at least far much attenuated. Actually, if the gains in productivity in agriculture would have been at least at the average of the national economy, the catastrophic slump of 2009 would have been avoided. Calculations or rather the simulation performed show that the maximum dive of the economy would have been at 50% of what it has actually been in 2009. Accordingly, the trough of the economy would have been at somewhere around -5.5 GDP% on the year early as against a scary -8.7%, while for the last quarter of 2009 on the year early alone, instead of a fall of -6.6% in the country's GDP, one would have confronted with a more manageable -3.5%. Gains from such a "would-be evolution" and therefore from investment into what we have called even five years ago "the agricultural pillar of the rural" (*le pilier agricole du rural*) are consequently easy to commensurate, with loss resulted, we suppose at least, likewise!

[5] This would actually mean that the economy would have to develop commercial ties with the different regions of the world almost in exact proportion to their respective share in the world GDP or alternatively with their contribution to GDP%. Thus, theoretically at least, given the fact that Asia is taking an increasing share of the World GDP and in the meantime is making a growing contribution to GDP%, "connecting' so to say with Asia in a proportion that would either match Asia's share in the world GDP or its contribution to GDP% would have saved the RO economy from recession, hypothetically "*bien sur*". Although this is pure theory as no one ever has achieved such a perfect match, it nonetheless points to the necessity of a reorientation of the trade flows towards regions having an increasing potential of growth.

Chart no.7



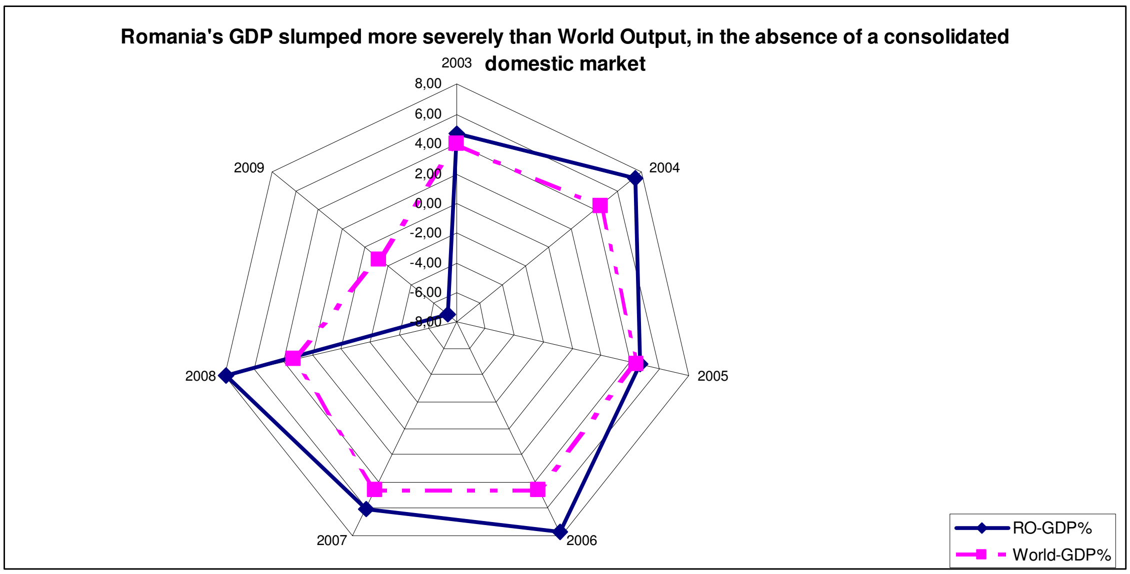
Source: NIS data plus calculations of Dr. Catalin Ghinararu ;

3. Nimbler, smarter and greener – Romanian agriculture in the decade to 2020

The fact that Romania did not capitalize sufficiently on what has been an exceptional period of growth not likely to repeat itself soon and which has occurred just at the right moment after two decades of prolonged and painful economic decline (the '80s and the nineties of the 20th century) can be attributed also largely to the fact that the country's successive administrations have fallen to the mirage of fast, easy-going development via a seemingly boundless flow of FDI going into so-called "star", "fast-growing" areas of the economy. These were promising blue heaven at hand but, in the end, when, the cycle of the economy went into its normal reverse, have proven that they were nothing more than empty, though of course no longer blue, sky.

Prices for nearly all merchandises (i.e.: read goods) usually can be grouped into two broad categories, the "spot" and the "futures". Spot prices are usually what one can get on the market at one very moment. However, most of goods, not services unfortunately, can be stockpiled and be sold at a moment which lies ahead of their actual date of production. That is IN THE FUTURE. Prices for what we call commodities and especially staple commodities, chief amongst which stands food, are especially sensitive at what we call spot and future prices. Generally an un-improved agricultural sector, like the Romanian one, can only work on spot prices and therefore fails to harness the potential of futures which, in this respect not only tend to magnify the gain but also manage to shield producers form the vagaries of what is a highly volatile market. In other words, while on the spot one might get fairly low on wheat or on fresh vegetables as it will sell them when there is over-supply, on futures the same would get an advantage as it will be able to mark them for the time when supply is scarce and need high (e.g.: the winter period in this respect). Moreover future prices will act as a shield against the general vagaries of prices. Thus, they will bring in a gain when the sale of other goods and services might go at a loss. Our example with the 1907 panic pointed exactly at that. At the time, the good harvests of 1905 and 1906 has been sold in 1907 thus mitigating the impact of what would have been, due to the circumstances of the general market coupled with an unfortunate spell of civil unrest, a otherwise disastrous year. The same could have been valid for the current period if investment would have poured in agriculture at least at the average rate it went into the broader RO economy. If this would have happened, Romania would have been able to draw some advantage from the fact that prices for food staples have been on the rise throughout most of 2007 and 2008 and thus to a certain extent at least, keep its balance of payment balance under some degree of control. In the meantime, it is more than clear from the simulation in the preceding paragraph, that an agriculture where some investment would have gone, would have been able, on the back of a fair year such as 2009 has been, to compensate for the tremendous loss of output in industry and services.

Chart no.8



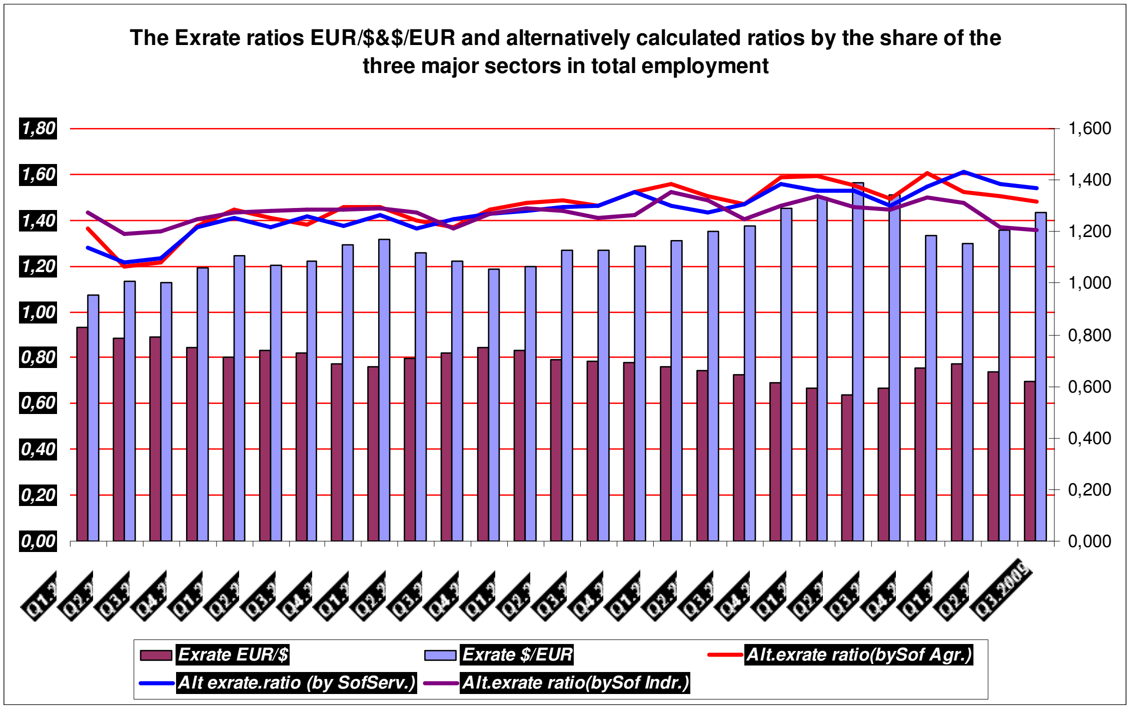
Source: NIS and EIS data processed by Dr. Catalin Ghinararu;

Taking into account the challenges of the decade to come, a decade that is for surely going to be ever more testing for the European economies, for the emergent ones in the East even a serious bout more than the rest of the crowd, just concentrating on making the agriculture nimbler in terms of employment is not enough. Actually it would be wholly misguided. Policies up until now have attempted just that and thus have not only undermined but, have wholly discredited a sector that is at the core of Romania's comparative advantages and practically the only one that can be realistically turned into a competitive advantage. Getting nimbler would of course mean releasing more individuals for employment into other sectors thus contributing to a rise in productivity that would not be accompanied, though in the current times of recession this risk does not really exist, by an upward race of salaries. But such a shedding of labor does not have to be rushed. It has to come not as a result of confidence undermining into the sector's capacities which has done so much harm to the country as a whole but, as a result of investment being encouraged openly to go into agriculture. Sinking investment of the type that generally acts as a non-inflationary stimulus to growth would be the most beneficial. Out of this and in accordance with the blueprint of the EU 2020 Strategy, greening would rank chief amongst. This and not a blunt and unsubstantiated drive out of agriculture and into a practically economic wasteland as it happened during the growth years of 2001-08, would make agriculture *not only nimbler*, for this is relatively easy to do, ***but actually smarter***. **A smart agriculture would be one capable of mitigating the natural alternation of good and bad years, especially if a context of climate change ultimately proves true. Being green does not mean actually falling to the vagaries of nature. Rather it means mitigating those while capitalizing on the natural factor with which, for agriculture alone, as we have abundantly argued in our 2005 paper, Romania is more than abundantly endowed.** It also means making use of the differences that will always exist between spot and future prices on a market that is especially sensitive to that and which, as proven by the current balance-sheet type recession, has shown a far much greater resilience of prices for the agriculture-related staples than to other goods not to say services.

Finally, one does not have to forget that nimbler, smarter and greener are not ends in themselves, as Europe and its MS-economies, Romania amongst them, have to compete on a global market that is fast altering and whose ultimate shape is yet to divine. In this respect keeping terms of trade that would help nurture growth and protect the job market in times of recession rests essential. While taking into account the fact that soon enough the Romanian economy will be part of the Euro-Zone and thus exchange rate with what is its main export market will no longer matter, we will nevertheless also take into account what might be a possible delay of such an event, delay that might be triggered precisely by the current adverse situation in the world economy. Accordingly it might be that, terms of trade (as expressed of course by the exchange rates) both against the EUR-denominated markets as well as against the US$-denominated ones will still matter for a while to go. That is not to say what if some other currencies might enter into the broader play!

As such, we have attempted to see, for the purposes of the current paper, if not only the dynamics of the exchange rates or of the calculated exchange rate ratio do affect the share of the three major sectors in total employment but, if also the reverse is valid. As it has turned from a series of simple, single variable regressions, it is. The share of each of the three major sectors in total employment does affect the variations of our calculated exchange rate ratio. Actually what comes out are three different exchange rate ratios, each one being the result of applying the regression equations resulting when putting the exchange rate ratio in dependence of each of the three sector employment shares in total employment. Plotting them together with the evolutions of the actual exchange rates of the national currency (RON) as against both the US$ and the EURO paints a more than compelling picture. If the exchange rate ratio associated to the share of services in total employment practically mirrors the variations of the actual exchange rate between the national currency and the EURO, thus only showing how much the service industry is dependent on the EURO zone area developments, the one calculated in dependence of the share of industry clearly mirrors the vagaries of the RON/US$ exchange thereby showing how much the Romanian industry is dependent on US$ denominated imports of raw materials and thus how vulnerable to gyrations of prices on what are turbulent markets. The only calculated ratio that stands in between is the one calculated in dependence of the share of agriculture in total employment, thereby only pointing to its stabilizing role. Of course such a role gets even more prized in times of crisis and these are likely to continue for while onwards, even if the severe symptoms of current global downturn will start receding. The very existence of a fair share of the total employment in agriculture, acts actually as a lever of stability and so it also did during the tough years of Plan to Market Transition.

Chart no.9



Source: NIS & NBR data processed by Dr. Catalin Ghinararu;

Of course in its current shape this lever is more than blunt and can only act as a stabilizer at the lowest of levels as again, it did during the nineties. However turning back is not the point in any economic development strategy. Rather incorporating the lessons of the past one has to move forward. Thus investing in the agricultural pillar of the rural will also mean making the lever of agricultural employment smarter. Instead of acting as stabilizer at the lowest possible of levels (negative equilibrium) it can act as a pivot around which the economy can be turned around, a genuine counter-cycle instrument. For this to happen, not only that Romania will have to keep allocating the largest share of EU assistance towards agriculture but, it should also attempt re-designing the other, non-agriculture oriented assistance instruments, so as to incorporate some sort of agriculture-related dimension. This is critical if the country wants to overcome the current downturn and return to a growth that is not erratic and non-sustainable in its character but **sustainable and resilient**.

Conclusion…. Or something alike it

Resilience must have been in the mind of modern Romania's most prominent founding-fathers in the mid-late 19th century, Ion C. Bratianu when, during a heated debate of the Romanian Parliament voiced the memorable phrase "*…..whatever the progresses of industry and commerce, agriculture will stay our first and foremost of industries*". Actually the debate from which we have extracted this phrase had to do with the organization of Romania's National Bank in the 9th decade of the 19th century. For us, and we do think, for others also, the link between what are macro-economic policies designed to preserve overall stability and preserve the conduciveness for business of the wider economic environment and, sector-related policies, is more than clear. It is a clear statement of what agriculture can mean for a national economy, especially one where the natural factor destined for such an activity is in a clear, all-too evident abundance. It represents not a buffer of last resort, a refuge of huddled masses having been shed from crippled industries or inflated services after periods of shallow boom but a real alternative that shields from the vagaries of the market.

Romania has unfortunately missed a lot of the economic development that has been going on throughout the 20th century. After the disaster of communism and the havoc of Plan to Market transition, the country's resources are too meager to feed empty ambitions of "conventional" so to say high-tech. This is beyond the means the country can realistically muster and trying to allocate resources for such a far-fetched end would be misguided. Moreover, agriculture and especially "green" agriculture which does not at all equal, as some might wrongly believe, agro-tourism or household, low-productivity production but production that mitigates first and foremost the alternation of good and bad years in terms of weather conditions, bringing thus onto the markets food that is not only abundant but also healthy and reasonably cheap, is the true high-tech! Resources must therefore be assembled for such an end.

Looking into the future and taking stock of the existing forecasts, mostly of the ones performed by established think tanks including the ones commissioned by the CEDEFOP Centre to cater for the anticipation of the demand and supply of skills in Europe show that, in 2025, Romania will still have the largest demand for farm workers in Europe. Agriculture will still by then account for 19% of total employment. However, here lies the challenge ahead. What will these 19% make for? Will they make for an aged workforce, with poor productivity, a relic of the past that will serve the country at nothing leaving it at the periphery of the European Economy, always a troubled member in need of hastily scrambled rescue packages OR, will they make for an entirely revamped segment of the labor market, for "green farmers" manning the Eastern Agricultural Pillar of the Union and thus acting as a front-runner of what would be a smarter and greener broader European economy?

The figures are of course there and they can be easily contested or accepted as they are but, beyond them, lies what actually we may call the challenge. Our argument both here as well as in the previous paper has slowly sifted into the decision making process and proof for that is now aplenty. It has to go now one more step forward and acknowledge the reality of the markets with their inherent volatility and cycles which, far from tamed, look ever more voracious, especially when it comes to small, open economies, Romanian being one of them. Investing therefore in agriculture and turning what is now truly a sector holding too much of the workforce while giving far too little in terms of output is Romania's chance, maybe the only one left in the current circumstances, including in terms of its accession into the EURO-ZONE. One must understand that an economy that cannot construct economies of scale on the domestic market will be forever incapable to cater for its human resources. No resources can be generated by investing solely in services, including here education and health, that do not produce some tangible output. The idea that an economy can totally and completely remove itself form the tangibles and evolve wholly into the sophistication of the intangibles, be they of financial nature or of knowledge nature, has been badly shattered by the current crisis. Economies that have been more feet on the ground (some bigwigs like Germany and France included) have weathered the storm far much better than the ones that have neglected those, many countries in the East of the Union included in the latter unfortunate lot.

Investing in agriculture and encouraging the Romanian authorities to do so, mostly with respect to the human resources in the rural areas, some said when I have presented the first paper on the issue, would have meant discouraging the pursuit of other more bold options. Those bold options are now in tatters and so is the Romanian economy its wings broken. This must serve therefore as a compelling argument that while "*Fortuna audaces juvant*", "*Vigilentibus, non dormientibus jura sucurrunt*". Investing therefore in the agricultural pillar of the rural would therefore mean investing in vigilance on a turbulent market for the decade to come and in the sustainable development of its human capital for an even far-away future.

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