

# Scanty jobs: unemployment can be crushed

## Swelling unemployment

Unemployment is generally viewed as one of today's biggest and unsolved problems, threatening both the economy recovery, and an already threadbare social restraint. According to ILO (International Labour Organization), the crowds of unemployed reached 201.8 million in 2013, not including at least 25 million "discouraged job seekers" — for comparison, consider that the total United

States labor force counts 155 million. ILO's econometric projections forecast an ongoing swelling to attain 215 million by 2018, all attempts by numerous political leaders to boost employment notwithstanding.

## A hard nut to crack

The unemployment reality portrayed in the chart (Fig.1) (all values as indexes, 1998=100, to allow for easier trend comparisons) is certainly a much harder nut to crack than most professional soothsayers pretend to believe. Indeed, the data tell us a damning story: unemployment is there to last, the struggle for jobs is bound to become a daily worry for a growing portion of mankind, and neither the deflationary policies promoted by most governments under the ideological guidance of such wizards as the IMF (International

Monetary Fund), the WB (World Bank), and the OECD (Organization for Economic Co-operation and Development), nor the array of aggressive economic boosting measures advocated by their neo-keynesian adversaries seem capable of derailing the runaway unemployment phenomenon.

The way employed and unemployed, working-age and active populations fared in the last 20 years and are projected to develop in the coming future,

suggests that decision-makers and their advisers who undertook the agenda of fighting unemployment, in fact (A) achieved its opposite; (B) could never do it; and anyway (C) aren't willing to do it.

## A. Failed to achieve

Instead of reducing, they increased unemployment. The 2007 initially financial, then economic crisis has been followed virtually everywhere, notably in major economies like Europe and the USA, by a response of which the pivot is an unreachable public debt target, justifying severe belt-tightening and deep deflationary programs. Allegedly, these programs ought to redress the imbalances of public finances, thus winning back the financial markets' trust, and enabling the economic upturn, including sustained job

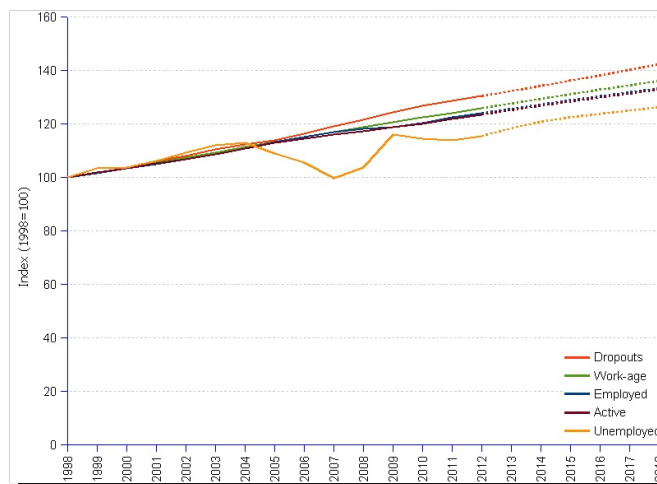


Fig.1: Unemployment trends 1998-2013 and ILO projections till 2018.

creation. Despite leaders and experts bragging about their benefits, such programs accelerated the average annual growth of unemployment, which rose from 0.7% to 2.9% after the 2007 landmark, thus adding 22 million to the 2006 unemployed. Concomitantly, the supposed recovery programs perversely bred legions of working-age-neither-employed-nor-unemployed persons, duly dispatched to the lower circles of hell — 1.9 billion dropouts in 2013 or 225 million more than in 2006. Promoters of such policies turn the blame down flat, on the grounds that the potion was right, but the dose was not strong enough. Whether the pundits like it or not, the fact is that they promised a return to economic normalcy and net job creation, but delivered nothing but wider unemployment, both open and covert, during the elapsed seven years. Their predictions, which missed the big financial crisis of 2007 in the first place, have been thoroughly falsified, forcing the conclusion that they are based on worthless, unrealistic theories.

## B. Will fail to achieve

They couldn't, even if they wished to. The global working-age population is 2.1 billion or 66% bigger, and grows faster (at the annual average rate of 1.56%) than the employed population (that grows at 1.45%). A sizable resorption of unemployment would therefore imply an intense overheating, insufferable from the economic, financial, natural resources capacity, and environmental viewpoints. For the sake of the demonstration, let us assume that a willful world governance would develop a 5-year plan to bring unemployment down to a reasonable level, say around 3% as in today's Switzerland, and to chop by half the current rate of dropouts (36% of working-age population), at the horizon of 2018. By playing with the data in the table below (Table 1), one

will find that these targets would entail extravagant trend reversals like the following ones:

- Growing the active population up to 4.6 billion (6.4% average annual rate) instead of the ILO forecast 3.6 billion (1.4% average annual rate). Active population would thus represent 82% of the working-age population, far above the ILO projected 64%.
- Dropouts (working-age population neither employed nor unemployed) would be lowered to 1 billion, well below ILO's projected 2 billion, that is 18% of the working-age population instead of 36.2%. That would mean an inflection of the curve from the projected average annual growth of 1.8% to a super fast decrease rate of -11.7%.
- The effect on employment would be dramatic: 4.2 billion employed or 96.9% of active population, instead of the projected 3.4 billion (or 93.97%). This would be achieved through an annual job net creation average rate of 5.73%, four times higher than the projected 1.45%.
- As a consequence, the global unemployed would remain 72 million below the ILO projected 215.2 million, totaling 144.2 million or only 3.15% of active population. The trend reversal would be phenomenal: a -6.50% annual average decrease of unemployment would substitute for the projected 1.18% annual average growth.

Such profound changes should imply a real (adjusted for inflation) economy growth at the rate of 6.2% — highly implausible, given the modest 2.74% real annual growth achieved in

the 15 years from 1998 to 2013. An economic boom of this magnitude would place unbearable strain upon the entire production chain, from the supply of fixed capital, to the financing of such a large scale effort, to the sourcing of the required skilled labor, and the management of the whole process. However, even if these barriers could be overcome, the plan would still stumble upon two major obstacles <sup>(1)</sup>:

1. What is left of natural resources is shrinking alarmingly. Oil is currently reaching its world peak production rate. Probably only 20 years, give or take, of silver, gold, copper, indium and other resources are available. In many places of the globe, renewable water reserves are at the brink of dropping below the 500 cubic meters per person per year deemed a minimum for a functioning society. Many wild fish species may be fished out in only a few years. The reserves of arable land are exploited at their limits. Cereals production is hitting the productivity ceiling. The list could be extended to most of the natural resources used in our modern economies. Any plan to take us out of trouble by means of unbridled economic growth cannot fly high, because it will rapidly reach the limit of the planet's capacity.
2. The constraints of industrialization on our environment, compounded by two centuries' worth of green-house gas emissions, are already shaping our daily life and becoming an imminent threat. Large cities in India and China are clouded by thick and hazardous layers of fumes and dusts that totally obscure the sunshine. Glacier melt accelerates so quickly that Himalayan


and Alpine ice will soon fail to feed adequately Asia's and Europe's major river valleys. More violent and more frequent extreme weather events resulting from the global rising temperature are affecting global agriculture, the prevalence of pests, and the safety of larger populations. Currently, few genuine cuts in greenhouse gases have been effected, in spite of the mellow objectives assigned by the multilateral Kyoto protocol entered into force in 2005, and the ensuing climate talks, of which the 2012 Doha meeting is the latest instance. Environmental control has been unachievable in the context of economic recession — the difficulties would be far greater in the context of an overheating economy.

Having to face such challenges, since he who fails to do less will fail to do more, it is doubtful that the leaders of such a project could ever deliver anything else than a monumental failure, bringing about a generalized chaos and consequently further unemployment.

### C. Unwilling to achieve

In any event, should one effective solution be found, current leadership not only would be unwilling to implement it, but would never allow it to be brought to discussion. The reviewed approaches rest upon the belief that economic growth and the consequent increase of the work to be performed are the all-exclusive means to create jobs and decrease unemployment. The difference between the two is that, in the case of the deflationary policy, leaders think that the medicine is out of price and unaffordable; in the second case, they are convinced that one cannot afford not to go for growth at full speed. Reason shows that the first one failed, and the second can

indeed kill the patient. And yet, the unemployment problem can be fixed, solutions exist, and have already been partially or temporarily implemented in several countries. The alternative policy consists of redistributing

the available work by reducing work schedules, without lowering pay levels, and focusing on efficiency and productivity gains instead of straight gross product growth. 

Global Unemployment, Working-age and Active populations 1998-2018											
Year	Working-age population <sup>1</sup>		Dropouts <sup>2</sup>		Active population <sup>3</sup>		Unemployed <sup>4</sup>		Employed <sup>5</sup>		
	million	index	million	index	million	index	million	index	million	index	
1998	4,103	100	1,420	100	2,683	100	170	100	2,513	100	
1999	4,177	102	1,442	102	2,735	102	177	104	2,558	102	
2000	4,255	104	1,477	104	2,778	104	177	104	2,601	104	
2001	4,330	106	1,507	106	2,823	105	181	106	2,642	105	
2002	4,409	107	1,538	108	2,871	107	186	109	2,685	107	
2003	4,490	109	1,569	110	2,921	109	191	112	2,731	109	
2004	4,571	111	1,595	112	2,976	111	193	113	2,784	111	
2005	4,651	113	1,620	114	3,032	113	186	109	2,846	113	
2006	4,728	115	1,656	117	3,073	115	180	106	2,893	115	
2007	4,804	117	1,691	119	3,113	116	170	100	2,943	117	
2008	4,879	119	1,728	122	3,151	117	177	104	2,974	118	
2009	4,953	121	1,766	124	3,187	119	198	116	2,989	119	
2010	5,028	123	1,803	127	3,225	120	195	115	3,030	121	
2011	5,099	124	1,828	129	3,271	122	194	114	3,077	122	
2012	5,171	126	1,854	131	3,317	124	197	116	3,120	124	
2013	5,243	128	1,881	132	3,362	125	202	118	3,160	126	
2014	5,314	130	1,908	134	3,406	127	206	121	3,200	127	
2015	5,385	131	1,936	136	3,449	129	209	123	3,240	129	
2016	5,453	133	1,964	138	3,489	130	211	124	3,278	130	
2017	5,522	135	1,993	140	3,529	132	213	125	3,316	132	
2018	5,590	136	2,022	142	3,567	133	215	126	3,352	133	
Average annual change 1998-2018	1.56%		1.78%		1.43%		1.18%		1.45%		
Average annual change 1998-2006	1.79%		1.94%		1.71%		0.68%		1.78%		
Average annual change 2007-2013	1.47%		1.78%		1.29%		2.90%		1.19%		

<sup>1</sup> Working-age population is the population above a certain age. The ILO standard for the lower age limit is 15 years.  
<sup>2</sup> Dropouts equal working-age population less active population, and are those working-age persons who are neither employed nor unemployed.  
<sup>3</sup> Active population equals the sum of the employed and the unemployed.  
<sup>4</sup> Unemployed include all persons of working age that during a reference period are without work, are available to start working, and took active steps to seek work.  
<sup>5</sup> Employed persons equal active population less unemployed.

Table 1: Unemployment trends from 1998 to 2013, and ILO projections until 2018.

## Looking for alternatives

The reduction of the working hours schedule pegged to the productivity gains seems to be the only workable way to overcome the unemployment concern. The chart (Fig.2) (index numbers, 1998=100, to allow for easier comparisons) illustrates the effects of the shortened schedule scenario applied retrospectively from 1998 through 2012, the

corresponding data appearing in the table of the simplified model (Table 2). The more salient features are the fast growth of employment, attached to GWP (gross world product) growth, the slowing down of working-age-neither-employed-nor-unemployed or "dropouts" growth, and the consequent undoing of unemployment, which evaporates by 2006.



## Productivity, not the product

The simplified model takes as given two variables: the working-age population numbers, and the GWP values. In the 15 years between 1998 and 2012, real GWP, that is adjusted to inflation for 2005=100, grew by US\$ 17.2 trillion. This has been achieved by a parallel increase of the employed population of 607 million. It is easy to determine that the gross productivity per employed person grew at the average annual rate of 1.16%.

### Productivity sharing creates jobs

Other things remaining equal, namely the pay levels unchanged except for the deflation factor and the gross economic output as given, let us assume that the productivity gains are cut in halves: one half to further compensate investors, the second half to improve the labor status by shortening the work schedules, thus inducing the hiring of a larger portion of the active population. The results are a fast acceleration of employment that will siphon resources from the pool of active population, a rapid decrease of unemployment, and the resulting need to hire labor from the working-age-neither-employed-nor-unemployed pot. The unemployment problem would be fixed. In fact, by focusing human ingenuity on environment-friendly efficiency and productivity gains, instead of sheer product growth, a lasting sharing of work by all working-age persons, as well as a longer life span for planet earth could be achieved.

## Better work and life conditions

Obviously, labor is not a commodity that can be moved, reassigned, or re-skilled instantaneously. Some level of technical unemployment will always withstand — elapsed time to select, hire, induce, retrain and bring up to speed of workers, time between two jobs, time to change over production setups, etc. However, the model is just a sketch delineating an alternative and viable approach to the labor conundrum. It shows that it is possible in principle to eradicate the unemployment leprosy, to offer workers and their families better work and life conditions, to protect their income levels, all this without overheating the

economy, thus gaining time to explore more environment-friendly living and working practices.

### Demand or wipe the tears

Of the extra US\$ 17.2 trillion GWP generated between 1998 and 2012, a big chunk, exactly US\$ 2.8 trillion or 16.2%, have been diverted to the balance sheets of the billionaires <sup>(2)</sup> — a small club of 209 names in 1998 that grew to 1,153 in 2012. It is predictable that neither them, nor the vaster crowds of multimillionaires, nor even their high-paid surrogate agents — politicians, lobbyists, professional advisers, influencers, technicians — will look on calm and impassively while someone dares to take away a full half of their gargantuan cut. Fortunately for them, the

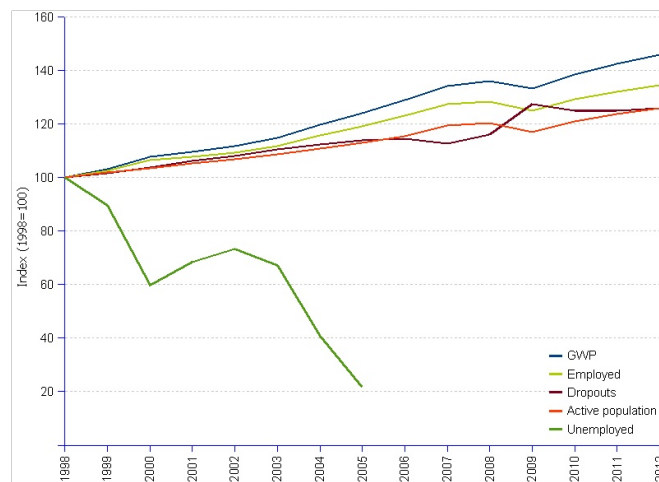



Fig.2: Achieving zero unemployment through redistribution of available work — a simplified model.

discussion of the subject itself has been diligently inhibited on all sorts of pretenses. As for the underdogs, they ultimately face a simple choice: to demand instead of asking, to

force the door and impose the debate, or to buy enough facial tissue to wipe the tears. 

Zero Unemployment Simplified Model 1998-2012										
Year	Gross World Product <sup>1</sup>		Active population <sup>2</sup>		Employed <sup>3</sup>		Unemployed <sup>4</sup>		Dropouts <sup>5</sup>	
	million	index	million	index	million	index	million	index	million	index
1998	37,327,740	100	2,683	100	2,513	100	170	100	1,420	100
1999	38,580,212	103	2,735	102	2,582	103	153	90	1,442	102
2000	40,217,907	108	2,778	104	2,676	107	102	60	1,477	104
2001	40,911,183	110	2,823	105	2,706	108	117	68	1,507	106
2002	41,755,075	112	2,871	107	2,746	109	125	73	1,538	108
2003	42,924,637	115	2,921	109	2,807	112	115	67	1,569	110
2004	44,714,096	120	2,976	111	2,907	116	69	41	1,595	112
2005	46,328,509	124	3,032	113	2,995	119	37	22	1,620	114
2006	48,218,630	129	3,099	116	3,099	123			1,629	115
2007	50,126,644	134	3,203	119	3,203	127			1,601	113
2008	50,848,135	136	3,230	120	3,230	129			1,649	116
2009	49,775,258	133	3,144	117	3,144	125			1,810	127
2010	51,770,602	139	3,251	121	3,251	129			1,777	125
2011	53,236,186	143	3,324	124	3,324	132			1,775	125
2012	54,483,213	146	3,382	126	3,382	135			1,789	126
2012: variation of model to actuals	0		+65		+262		-197		-65	

<sup>1</sup> Real GWP (Gross World Product) in constant US dollars, 2005=100.

<sup>2</sup> Total number of employed and unemployed persons, after modelization. For actual data see table of trends 1998-2013.

<sup>3</sup> To estimate the number of employed persons, (1) we computed the gross productivity per worker by dividing GWP by the actual employed persons; (2) we found that gross productivity increased at the average annual rate of 1.16%; (3) we allocated half of the productivity gains, the equivalent to an annual growth rate of 0.58%, to the workforce, sharing the workload among more workers. In 2012, this operation would have required an additional 262 million workers.

<sup>4</sup> Unemployed persons would have found jobs already by mid-2006, thus reducing unemployment to zero — technically an impossibility, ignored in this simplified exercise.

<sup>5</sup> In 2012, the hiring of 262 million workers more, would have required that 65 million former "Dropouts", e.g. senior workers and left-outs, join the labor force and contribute to deliver the GWP output.

Table 2: Simplified model of job creation through productivity sharing.

#### References:

ILO - International Labor Organization, ILOSTAT Database.

Global Employment Trends 2014, International Labour Organization 2014.

United Nations Population Division's annual estimates and projections.

The World Bank — World DataBank

#### Source:

[http://stats.areppim.com/stats/stats\\_unempl\\_indice\\_98x18.htm](http://stats.areppim.com/stats/stats_unempl_indice_98x18.htm).

#### Notes:

(1) Overview of the 21st century environmental challenges in Scientific American, Special Issue, Sept. 2010.

(2) Data on billionaires and their wealth in <http://stats.areppim.com/rich.htm>.