

## THE LOSS OF INTELLECTUAL CAPITAL DUE TO DRUG ADDICTION AMONG THE ROMANIAN YOUTH

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### ABSTRACT

*The versatile nature of the concept of Intellectual Capital stems from its origin, evolution, and wide application, from public organisations, to private ones, from individual to academia, from economic analysis to national diagnose. Due to this ability to reveal the hidden elements that are sources of added value for a nation, the application of this concept at decision-making level was simply one step away, as, according to Bontis (2004), more and more states became aware that the „resources of a nation are first of all its people, citizens, their level of education, personal culture, honesty, sense of civic responsibility”. Since young people are the driving force of a nation, the challenges this population category faces should be at the heart of any policy decision. Drug use among young people continues to be an important public concern at global level because illicit drug use affects not only the user but also non-users, family members, the peers, the community and the society as a whole.*

*The harms or negative consequences of drug use have been in the focus of researchers for several years now in the attempt to estimate the „social cost of illegal drug use”. Illicit drug use generates additional costs for healthcare, the justice system, social welfare, prevention interventions, costs related to education and research and a loss in productivity due to premature mortality. Additionally, lost productivity can be triggered by reduced labour participation, incarceration, hospitalization, and participation in treatment programs away from work. The purpose of this article is to generalize the concept of intellectual capital and place it in relation to the dynamic drug use phenomenon which affects young people. The results of the research are based on the analysis of academic investigations conducted by various authors and of publications of significant research and public bodies.*

**KEYWORDS:** *intellectual capital, national intellectual capital index, national welfare, social cost, social cost of drug use, strategic management*

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### 1. INTRODUCTION

Edvinsson once told the *University World News* that "A country may be wealthy today, but what about tomorrow? Knowledge and human capital must be sustainable" as an introduction to his idea that investment in intellectual capital brings quality growth that lasts for a long time. And by quality growth he meant quality in education and human experience rather than numbers of people in universities or numbers of universities.

According to Edvinsson there is a straight line between knowledge and human capital and the prosperity of a nation. In his vision, universities are seen as training spaces for the human brain, but what if the human brain that universities are meant to mold and help expand in order to create and innovate is trapped in a quest for relaxation, pleasure or euphoria? What if this quest becomes the sole reason of living for a young person with a bright future? What if that young person is not the

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only one, but one of the thousands of drug users in the country? How can this equation between education and human experience be solved without losing the investment in the youth, a resource that is so important for the future of a nation?

IC is a concept that went beyond the limits of organisations and expanded to regions and nations while also gaining recognition for the assessment of individuals. While researchers analysed the concept of IC and its various applications, a general acceptance was reached as to some of its key components such as "knowledge, patents, and innovation as sources of wealth and progress" (Lin & Edvinsson, 2010). National level IC assessments followed and countries such as Sweden, Denmark began having their IC measures as did regions such as the Arab nations, mentioned by Lin and Edvinsson (2010) citing Bontis (2004) and Bounfour (2003). Further on, measurements were developed and validates as in the case of the 29 national intellectual capital indices model (NICI40), which included the "*hidden values of individuals, enterprises, institutions, communities and regions that are the sources for wealth creation, nourishment and the cultivation of future wellbeing*" (Bontis, 2004).

The efforts to identify and measure the intangible resources that are likely to create wealth at organisation level were paralleled at regional and national level, while researchers strove to reach agreement on the intangibles that constitutes the IC of a nation. While at organisation level the Nordic system based on human, structural and relational capital gained acceptance, at national level, IC was perceived as a combination between human, market (Bontis, 2004), process, financial and renewal capital. Several theories followed that went beyond the classical GDP breakdown, although correlated with many indicators of living standards.

For the purpose of this paper, focus will be laid on human capital as the key component of the IC of a nation and on the loss in IC caused by drug addiction, especially among university students, based on research and reports related to the social costs of drug use. The main observation is that society development and the drug phenomenon seem to co-exist in a system in which financial motivations are interlinked with biological, social and financial factors. Even if seen as a result of chemical substitution at brain level, or as a result of social and environmental factors, drug addiction is a phenomenon whose consequences go beyond the individual setting and generates family, community, social and national correlates that call for a response. Seen as part of a phenomenon, drug addiction is closely related to the illicit drug trafficking, with supply and demand being the key elements that bring dynamics to the illicit drug market. The response to this dynamic phenomenon is expected to be generated by policy, but because authorities that can deal with the negative effects of substance abuse have limited ranges of actions and limited resources, the starting point in any policy approach should be a clear view on the phenomenon in order to allocate resources efficiently. To this aim, research on what the costs of drug use are in certain population categories can show the level of social burden and help orient better responses.

## **2. OVERVIEW OF THE DYMENSION OF DRUG ADDICTION**

The drug problem is not an isolated phenomenon, that is restricted to a single geographic area, but a global phenomenon with major implications on the social scale. The estimates of the United Nations Office for Drugs and Crime, Interpol, Europol and the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) place the drug market third after the fire arm industry, with incomes of several billion dollars annually. According to the UN World Drugs Report 2005, the illegal (and untaxed) drug trade is 1% of the total global commerce. In this context, Europe is one of the most profitable illicit markets in the world, being the area with the highest prevalence for heroin, amphetamine and ecstasy use.

Upon the launch of the 2018 European Drug Report, European Commissioner Avramopoulos stated that that one of the priorities of the European Commission is to counter the dangers that drugs pose because drugs are an important threat to the health and security of citizens and especially the youth.

To this aim, an appeal was made to law enforcement, policy bodies and civil society to engage in a joint effort to fight the drug phenomenon in its global dimension generated by the increased production of drugs, expanding markets for synthetic drugs and the growth of drug sales on the internet. Even if illicit drug markets are difficult to monitor because of their complex system of production and distribution, estimates on the value of markets for illicit drug use can be made and in this respect the European Union was estimated by the mentioned fora at EUR 24 billion in 2013, with cannabis responsible for the largest share (38 %), followed by heroin (28 %), and cocaine (24 %), as shown in the latest 2018 EU report on drugs.

According to the report of a central European agency at the forefront of data collection and drug-related research (European Monitoring Centre for Drugs and Drug Addiction [EMCDDA], 2017) there are 87.7 million European adults experimenting with cannabis, out of which 1% adults use drugs on a daily basis. Additionally, at European level the prevalence of drug use and trend varies increasingly and treatment demand is in increase with 45% of new treatment admissions, as shown below.

Moreover, drug related deaths reached the number of 9,138 in 2018 according to the statistical bulletins published by the EMCDDA for the year 2018, with higher rates among young people aged from 25 to 39 and from 40 to 64 and with opioids being used in the majority of cases.

This complex consequences are also the reason why responses to this issue should be delivered by cooperation between different stakeholders (public, private, civil society) from several field such as health, justice, public order and economy, because the approach to addiction does not follow the linear model of *problem-options-solution-implementation*, as stipulated by Mendoza and Vernis (2008).

In time, trends in drug use oriented policy responses towards creating treatment services, care and social reinsertion services in the community and in prisons and providing responses that include core interventions, such as opioid substitution treatment and needle and syringe programmes, but also prevention interventions and social reinsertion programmes. However, various sources of data show that the drug phenomenon is a complex and heterogeneous phenomenon, which means that approaches can differ from one country to another depending on the trends of the phenomenon, the local realities and the actual response capacity of the institutions and civil society organisations.

### **3. DRUG USE AMONG HIGHER EDUCATION POPULATION. A ROMANIAN CASE STUDY.**

The trends of the drug problem in Romania can be easily brought in line with the trends of the European drug phenomenon. Even though Romania ranks last among the countries with significant prevalence of drug use, its geo-strategical position along traditional drug trafficking routes, make it a favourable area for drug transit and drug use, which is proven by the steady increase of the prevalence of use of illicit substances among the adult population in Romania over the period 2004-16. In terms of drug use among higher education population, the National Report (2011 data) to the EMCDDA by the Reitox National Focal Point mentions a survey conducted among 3,000 respondents, a sample that was representative for the higher education population aged over 18. Conducted in 8 university centres, the survey collected opinions on knowledge, attitudes and drug use patterns by using 215 questions (400 variables). Respondents had different subjects of study from the technical to the medical field, arts and economy. The findings of the survey showed that lifetime prevalence of any type of drug among students is 23.2% which includes all types of illicit drugs but also tranquilisers (without medical prescription) and new psychoactive substances (NPS) sold as legal highs. Recent drug use prevalence among students was 9% and the most frequent use was recorded for cannabis – 7.9%, followed by new psychoactive substances (NPS) – 1.4% and tranquilisers without medical prescription – 1.2%. Recent drug use referred to cannabis and ecstasy, but there was a diversification

of use and a presence of the use of ketamine among students, a drug which was detected for the first time in Romania during the General Population Survey in 2010.

In terms of motivation for starting drug use, most students agreed that the onset was because of the influence of their peers, the quest for thrills and curiosity. Family or personal problems were last among the reasons to start using drugs. Self-esteem, being aware of the danger of drug use for one's health, the fear of becoming addicted and the fear of dying were some of the most powerful reasons for not starting to use drugs. Having a bobby, the availability of drugs and media campaigns were also mentioned by the respondents as possible barriers to drug use but with a lower influence, as shown in the table below.

**Table 1. Reasons not to start using drugs (%)**

What is your opinion about what stops young people from trying/using illicit drugs?	total	Life-time prevalence of the use of:	
		illicit drugs	new psychoactive substances
consciousness/self-esteem	15.5%	11.8%	13.2%
being aware of the danger for health	14.2%	13.6%	16.2%
fear of addiction, of not being able to stop	14.1%	15.3%	14.9%
fear of death	12.6%	10.3%	10.4%
family/friend support	6.7%	8.5%	8.6%
education and cultural level	6.6%	6.8%	6.2%
resistance to peer pressure	6.2%	7.2%	8.8%
price of drugs	6.1%	8.7%	7.7%
fear of God	5.6%	4.5%	2.7%
fear of/respect for parents	3.5%	3.2%	2.5%
extra-curricular activities	3.2%	2.8%	2.0%
hobby	2.2%	2.5%	2.0%
availability of drugs	1.9%	2.1%	2.1%
media campaigns	1.5%	1.8%	1.6%
other reasons	0.2%	0.7%	1.2%
Total	100%	100%	100%

*Source:* Adapted from the National Report (2011 data) to the EMCDDA by the Reitox National Focal Point (2012, p.36)

While at first glance intrinsic motivation seems to be stronger, interventions that target young people in universities such as prevention campaigns, awareness campaigns and providing alternatives for a healthy lifestyle should be strengthened in order to provide young people with a strong set of protection factors. Comparative data should complete this picture by showing a current perspective of the young people on the importance of these factors in stopping or delaying drug use onset, as a starting point for a cost-benefit analysis related to preventive interventions.

The profile of the higher education student who uses drugs, made during this survey, showed similarities and differences for cannabis and new psychoactive substances users. Both categories of users were mainly male, aged over 24, employed and coming from families with a very good financial situation. Some differences appeared in terms of level of education, propensity to certain subjects and living conditions.

These findings can be correlated with data referring to the level of education of those who seek medical care because of drug use. For cannabis use only, 13.7% of those who were in need of medical care in 2016 were higher education graduates and 32.3% of the emergency calls came from high school and university students, according to the latest National Report on Drug Situation 2017. By

comparing this data with the general picture in which cannabis is the most frequently used drug among young adults aged 15-34 years, and the last year prevalence of this drug alone has doubled in 2016 as compared to 2013, there is grounds for analysing further the relation between drug addiction and the potential loss of productivity as a marker of social cost. However, this type of survey is a good starting point for further research into the social costs of drug addiction among higher education students who are seen as the driving force of a nation's human capital and prosperity.

#### **4. ASSESSING THE SOCIAL COSTS OF DRUG ADDICTION**

Illicit drug addiction cannot be restricted to the user only, because it affects not only the user but also non-users, family members, the peers, the community and the society as a whole. Drug use causes harms or negative consequences for the entire society and has been the focus of interest of researchers for several years now in the attempt to estimate the *social cost of illegal drug use*. Even though methodologically different, efforts have been put by researchers and public bodies into assessing the social costs of drug use worldwide, against the general acceptance of the fact that drug use costs our societies a lot in terms of healthcare costs, crime, and lost productivity. Additionally, there are costs of drugs use that cannot not necessarily be reflected in financial terms but create important health and social correlates, such as the spread of infectious diseases associated with drug use, drug related deaths, effects on unborn children, crime, unemployment, domestic abuse, divorce, and homelessness.

Illicit drug use generates additional costs for healthcare (medical interventions), for the justice system, the social welfare, costs of prevention interventions, costs related to education and drug-related research and the loss in productivity due to the premature death of drug users, as mentioned in the five-year research programme *Addiction and Lifestyles in Contemporary Europe - Reframing Addictions Project*. Additionally, lost productivity can be generated by reduced labour participation, incarceration, premature mortality, hospitalization, and participation in treatment programs away from work.

Based on the analysis of the same variables (healthcare costs, crime, and lost productivity), only in the US, the cost of drug abuse (illegal drugs, alcohol, and tobacco) was estimated to \$740 billion a year and growing, of which illegal drug abuse is estimated at \$193 billion, according to the National Institute on Drug Abuse. Health correlates of drug use such as infectious diseases (hepatitis and HIV/AIDS), death from overdose, effects on unborn children, crime, unemployment, domestic abuse, divorce, and homelessness, parental neglects and driving under the influence add up to the list of sources of additional costs for our societies.

The Institute also estimated that the loss of productivity caused by drug abuse reaches \$120 billion annually, while this loss also includes reduced labour participation, incarceration, premature mortality, hospitalization, and participation in treatment programs away from work. Additionally, drug-related crime is estimated to cost the American criminal justice system \$56 billion. In terms of healthcare costs, expenses related to medical interventions, treatment, prevention programmes and treatment research is estimated at more that \$11 billion annually.

Relevant for this type of analysis at European level is the *Addiction and Lifestyles in Contemporary Europe - Reframing Addictions Project* that brought together 200 scientists from more than 25 countries and 29 different disciplines in a five-year European research project (2011-2016). Some of the most important costs taken into account were healthcare costs, costs for the legal system, social welfare system, costs of prevention and education interventions and also the costs of drug-related research. Premature death was also included because drug users generally die earlier than non-users and this loss to the society can be measured in the number of years in which they could have contributed to the wellbeing of their communities and society. Having in mind the World Health Organisation estimate that 1 in 5 deaths of all premature deaths and ill-health in the E.U. is due to addictions, this indicator becomes even more relevant.

In terms of healthcare costs, it was revealed that at least one tenth of all costs in Europe's health systems flow into the treatment of various addictions, other costs such as those for untreated addiction, prevention and crime, adding up to the total. Based on a comparisons between Catalonia, Poland and Portugal in terms of drug related deaths attributable to alcohol, tobacco, illegal drugs, the conclusions of the European research project were that almost a third of premature deaths in Poland, Portugal and Catalonia are caused by alcohol, tobacco and illicit drug use and the proportion is even higher amongst men.

Researchers in the project also tried to identify those costs generated by using addictive substances that can be reduced by policy measures (i.e avoidable costs). Researchers pointed out the effects of the use of drugs by a family member on adults and children that are seldom neglected by research, policy and practice. The effects of drug use on this category translate into disruptive family relations, emotional abuse, physical violence, coping and financial problems that can change into health risks and become sources of additional costs for the society.

## 5. CONCLUSIONS

Drug addiction is not just about figures, as suffering caused by drug use can be measured only partially, but estimates can be done on how much drug addiction costs our societies and how is the intellectual capital of a nation affected by addiction among its young people.

The purpose of this article was to generalize the relation between intellectual capital and the dynamic phenomenon of drug use, with a focus on higher education students, as the driving force of a nation`s intellectual capital. The results were based on the analysis of several data sources, reports of public institutions, data bases, findings of academic research and project-based research, as well as the analysis of the literature in the field. Summarisation and conclusions were formulated based on the investigations conducted by various authors.

Based on this analysis, it can be concluded that the use of illicit drugs is recognised as a contributor to the global burden of disease, as several health problems are associated with the use of drugs. Because of its multiple effects, drug addiction is seen as a multi-faceted phenomenon with correlates at the health, legal, social and security level that can translate into additional costs for our societies. The various data sources available on the topic of social costs of drug addiction encourages further research into the impact of drug addiction among higher education students on the human capital and the prosperity of a nation. While recognising that higher education students are the driving force of a nation`s future, we are encouraged to develop further research into this topic, while being also aware of the applicability of this type of research for professionals and evidence-based policy-making.

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