An exploratory discussion on motivation, innovation, and success in the new digital world

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Abstract

According to the perspective of the authors, the subject of motivation is not trivial but central to organisational study and life. The journey discussed herein started with sport (and a master's dissertation written on the subject by the lead author, in 1993) and how prominent sportspersons put such an emphasis on motivation as an antecedent to success. We then move on to discuss organisational leadership, and then still further to the digital transformation we have witnessed, our article hence seeking to spark the debate on motivation, innovation and on achieving one's goals. The impact of COVID-19 on employee work motivation and productivity has shown us that employees were more likely to be motivated during a crisis if they felt their company cared about their health and well-being. Worker motivation did indeed decline during the crisis compared to the previous year. The main reasons are a lack of recognition and appreciation, a lack of career opportunities and stress due to the increased workload (including family obligations when working and staying at home longer). The lack of opportunity to socialise face-to-face in the work environment is also a motivation detractor. COVID-19 has had a significant impact on worker motivation. To maintain work motivation during a crisis, it is important that companies address the needs and concerns of their employees and take steps to promote their health and well-being. Clear communication, appreciation and recognition, and flexible working models can also help to maintain employee motivation. Creativity and its promotion are also important. In sport as in the office. One needs to fulfil our destiny as regards our possible contribution to society and our research and experience shows us that motivation will be central to the debate. We have also used IFR – intuitive feeling research – to write this article. As the authors are all experienced, we have relied on that and tapped into it to produce the discussion herein. An article forthcoming by Au-Yong-Oliveira et al. explains IFR in more detail.

Keywords: Inner work environment; intrinsic motivation; digital transformation; COVID-19; VOSviewer.

1. INTRODUCTION

Motivation (the motivation which impels us to do better, to give our best, in a given activity) is often underestimated as a predictor or antecedent of success.

Over the years and since his master's degree the lead author has been intrigued by the question: What is the difference between a good sportsperson and a great sportsperson? What is that X factor that leads to success? Having performed over 150 interviews, with an interview script, with leading sportspersons (including the world Nº1 men, women, and senior men, in golf; and a number of Portuguese Olympic medallists namely in athletics – including Rosa Mota, Carlos Lopes, Fernando Mamede, António Leitão, the Castro twins, among others) on the subject of talent and motivation, between 1993 and 2020 (please see Mansfield & Oliveira, 1994, 1995; and Au-Yong-Oliveira, 2020) the lead author realised the importance of motivation. With the right motivation (and attitude) many of the very successful sportspersons saw anything as being possible. This was very encouraging. Success was mainly seen to be a question of motivation.

Then we sought to start to draw an analogy with leadership – top leaders in organizations. A number of organizational leaders have also already been interviewed (a senior managing partner in a major law firm, a prominent politician, a former management consultancy partner in one of the biggest such firms worldwide, a university rector, a senior IT manager, a former Google operative, a marketing director, an administrator of a large family business, an international production executive, a former local authority leader, among others).

What is the predominance of motivation versus natural talent versus the necessary infrastructure? Which is most important? The variable motivation was again seen to take on tremendous importance. In fact, the way prominent respondents talk about motivation and what it means to them is very encouraging. It gives us hope. Hope that anyone may succeed, given the right motivation.

Natural [physical] talent is no guarantor of success. Indeed, according to one very prominent sports individual whom we interviewed, there are a lot of people full of talent walking the streets looking for jobs (Oliveira, 1993).

On the other hand, perhaps to be the best in the world a certain degree of obsession (though not in a clinical sense) is necessary (Mansfield and Oliveira, 1994). Certainly, high degrees of motivation may be seen to be an asset to be used to the fullest, in whatever endeavour one wants. Is motivation a talent, much as physical talent, to be exploited by whoever has it?

There is definitely a parallel between top sportspersons and top managers and organizational leadership worldwide, according to our exploratory research. In an article published in 1994, we stated that "many research studies have examined the relationship between motivation and levels of performance, and also between changes in motivation and improvements in performance. The present research, however, addresses a slightly different question. It is designed to examine what motivational and attitudinal factors are associated with becoming the best in the World in a particular activity – namely golf" (Mansfield and Oliveira, 1994, p.153). We now address a slightly different research question - what motivational and attitudinal factors do world leaders in sport share with the best organizational leaders worldwide?

At a time when sport in higher education is taking on new and renewed importance in Europe, such a question may reap relevant insights that may lead also to the creation of world leaders in the organisational sphere – as more and more students are excelling in sport, at the European or world level, while at university, and then becoming engineers and managers as their career choice. What lessons may be learned in transition?

Creativity is as necessary in the work environment (Amabile, 1998) as it is in the sports realm. In sports one must be creative both in competition (creating solutions to difficult problems and conditions which arise) as well as when practicing, to keep motivation levels high over what may be very long careers (a golf career may span 50 years given that senior professional golf tours also exist and are very rewarding financially too) (Oliveira, 1993).

Creativity leads to greater job satisfaction and results (Amabile, 1998).

Conclusions also indicate that a good leader is always willing and ready to give up their job to someone who is better. Someone not prepared to do that is not really a leader. A leader who has an authentic personality is an important skill. Leaders have to remain faithful to their own values. Being open-minded is essential. It is always necessary to have a competence and a consequence, to be a leader. From a CEO we expect their competence and their consequence in the decisions. They have to be the rock in the ocean, for the workers to follow and respect the leader. It is not necessary to work 24 hours seven days a week. They should have time for creativity and for developing a vision. The vision needs to be followed with their own personality and by being authentic and by being competent and having consequence (a good result).

This study also employs IFR - Intuitive Feeling Research – a new methodology based on researcher experience. Looking towards one's long and rich career one may realise that one harbours many of the answers, objectively, without having to seek knowledge elsewhere through interviews, focus groups or surveys. The possibility of autoethnography as a research method did not fully satisfy and our new IFR method looks beyond the above, through simplification. Not much more is needed than pen and paper (or a PC in the modern era) and some introspection and mature writing – which requires time and the mental availability to look to oneself for solutions to current societal problems.

The article continues with a methodology section and then with a section about Portugal (and its problems) and how it has to capitalize on its human capital better (to avoid emigration in large numbers). Then we discuss a bibliometric analysis and literature review on success and motivation. VOSviewer figures were created to aid the discussion and key terms were defined (table 1). Motivation as the central challenge in the

age of digital transformation and the experience of motivation change in the industrial world over the last ten years are then the topics under review. Finally, we conclude the article and give suggestions for future research.

2. METHODOLOGY

This article was written based on a new methodology named Intuitive Feeling Research (IFR) (Au-Yong-Oliveira et al., *forthcoming*). As the authors are all experienced (over thirty-five years of experience each), both concerning industry and research endeavours, we have used that experience to write the current study, in an intuitive and free-flowing manner.

IFR is a qualitative approach, a six-step process, originating in the "inner work environment" of the experienced researcher. It is a methodology to tap into unstructured knowledge which exists in the brain of the experienced individual. The steps are to first acquire expertise and experience (during one's career), then to seek to answer a relevant research question, to sit and focus on the topic, summoning thoughts and feelings accumulated over the years, writing them down, to then compare that knowledge to publications in a major database (e.g., Scopus), in an iterative process of free-flowing feelings and note taking.

The sports interviews are part of a larger project and on a longitudinal study on motivation and success. The interviews were mainly performed at sports venues (major golf tournaments) though a number of the interviews were also performed at the respondents' houses. The interview script focused mainly on questions on motivation (Maslow's hierarchy of needs), and on the most important ingredients for success (motivation, natural talent, and infrastructure – coaching and facilities), as well as on planning (in a written form or not). All of the interviews were audio-recorded, with permission, and then transcribed.

The interviews with managers and leaders in organisations (also used herein), done using a similar interview protocol, seek to link the previous research on sports to a broader area of management research. This study is part of a broader research effort whereby a book is to be produced regarding the subject *The hope of motivation*.

3. PORTUGAL – WHY IS HUMAN CAPITAL AND THEIR MOTIVATION AN IMPORTANT ISSUE TOWARDS INNOVATION?

One's motivation may be extrinsic, or intrinsic, or both.

"Extrinsic motivation comes from outside a person - whether the motivation is a carrot or a stick. If the scientist's boss promises to reward her financially should the blood-clotting project succeed, or if he threatens to fire her should it fail, she will certainly be motivated to find a solution [...] But passion and interest - a person's internal desire to do something - are what intrinsic motivation is all about." (Amabile, 1998, pp.4-5).

Portugal, according to the GII – Global Innovation Index 2022 (Dutta et al., 2022) – has certain characteristics that render the issue of human capital and their capabilities, capacities, and motivation [individually or of a group] an essential one to innovation output. Portugal registers a high classification regarding human capital [linked to educated individuals, their knowledge and their skills - which encourage innovation (Bate et al., 2023)] and research ["human capital and R&D are essential factors that explain innovativeness, particularly technological innovation in advanced economies" (Bate et al., 2023, p.7)] (22nd out of the 132 countries analysed) and creativity [leading to "intangible assets that include patents and copyrights, creative goods and services, online creativity" (Bate et al., 2023, p.11)] (25th out of the 132 countries analysed) – however, at the end of the day, we seem not to be capitalizing on these advantages. In particular, business sophistication [the existence of "knowledge workers, innovation linkage and knowledge absorption" (Bate et al., 2023, p.11)] in Portugal is low (34th out of the 132 countries analysed), in comparison to neighbouring European countries, especially. Portugal's innovation ecosystem ("companies in an innovation ecosystem use strategic tools to connect different business units" (Hieu, 2021, p.14); "the innovation ecosystem is achieved by exchanging fundamental knowledge, management savvy, infrastructure, and financial and non-financial resources within the boundaries of a virtual cycle" (Hieu, 2021, p.16); "innovation or entrepreneurial ecosystems could provide

different learning opportunities to organizations through collaborations" (Hieu, 2021, p.15, citing Spigel, 2017)), of the 132 countries analysed, reveals an underperforming trend (35th out of the 132 countries analysed, as regards knowledge and technology outputs) which shows signs of a cycle which may not improve in the short term (given that the market sophistication [including "investment, the credit system, trade, competition, and market scale" (Bate et al., 2023, p.11)] in Portugal is at the level of 42nd out of the 132 countries analysed).

Global leaders in innovation include Switzerland, the USA, and Sweden (occupying the first three places in the index). China, and despite perhaps us not having all of the relevant information, is currently 11th worldwide (GII 2022 rankings). Portugal, on the other hand, is ranked 32nd in the GII 2022 rankings. Leaders show high levels of business sophistication and knowledge and technology outputs – facets which inevitably contribute to more motivated youths.

Who in organisations has the power to change organizational culture and macro environments? Senior leadership. Intermediate leadership may also play an important role. So that we may learn and evolve concerning the data communicated above. Important decisions need to be made, including at the political (macro) level. Portugal's emigration levels of our youths are too high - a problem which needs solving.

Indeed, the need for an encouraging meritocratic environment could not be more urgent. We need to motivate our youths. And this will only come about if our managers and leaders are aware of the problem. Hence the need for this article.

According to the Oslo manual, developed by the European Communities and the Organisation for Economic Co-operation and Development (OECD, 2018, p.32):

"An innovation is a new or improved product or process (or combination thereof) that differs significantly from the unit's previous products or processes and that has been made available to potential users (product) or brought into use by the unit (process)."

Productivity is certainly slowing down, and not only in Portugal – as are the resulting breakthrough innovations which are brought to market. Everything seems to be more difficult now – right when artificial intelligence has arrived and is now threatening how we work and relate to one another.

Admittedly, the current war in the Ukraine has already changed us a lot, after the COVID-19 pandemic, which also changed the worldwide scenario. We have apparently stopped to ponder how we live and indeed how we want to live, this having made us more sustainability-oriented and more aware of others' suffering. Albeit, predictions indicate that a harder future awaits our youths, not as optimistic as what older generations are currently enjoying and have enjoyed in the past.

Employee engagement (to capitalize on Portuguese human resources), humane management (so that our human resources may feel valued), creativity management (so that its outputs may increase), agile organization (flexible, to accommodate talent), decent work (worthwhile...), beliefs (in the future), grit (resilience), and fair play (a meritocratic environment) are all variables and key words regarding the future of Portugal.

4. Bibliometric analysis and literature review – motivation and success

Using the following search terms in Scopus: Success AND "intrinsic motivation" – present in the title, abstract and keywords of the article – we found the following documents, as portrayed in figure 1. Clearly success is linked to intrinsic motivation, in the literature. Figure 2 is a VOSviewer depiction of the above documents (type of analysis - co-occurrence; unit of analysis: author keywords). 895 connected items are the result. Figure 3 constitutes a closer look at figure 2, more in-depth.

Scopus

The new, enhanced version of the search results page is available.

654 document results

TITLE-ABS-KEY (success AND "intrinsic motivation")

Figure 1 - Using the following search terms in Scopus: Success AND "intrinsic motivation" – present in the title, abstract and keywords of the article – we found 654 documents.
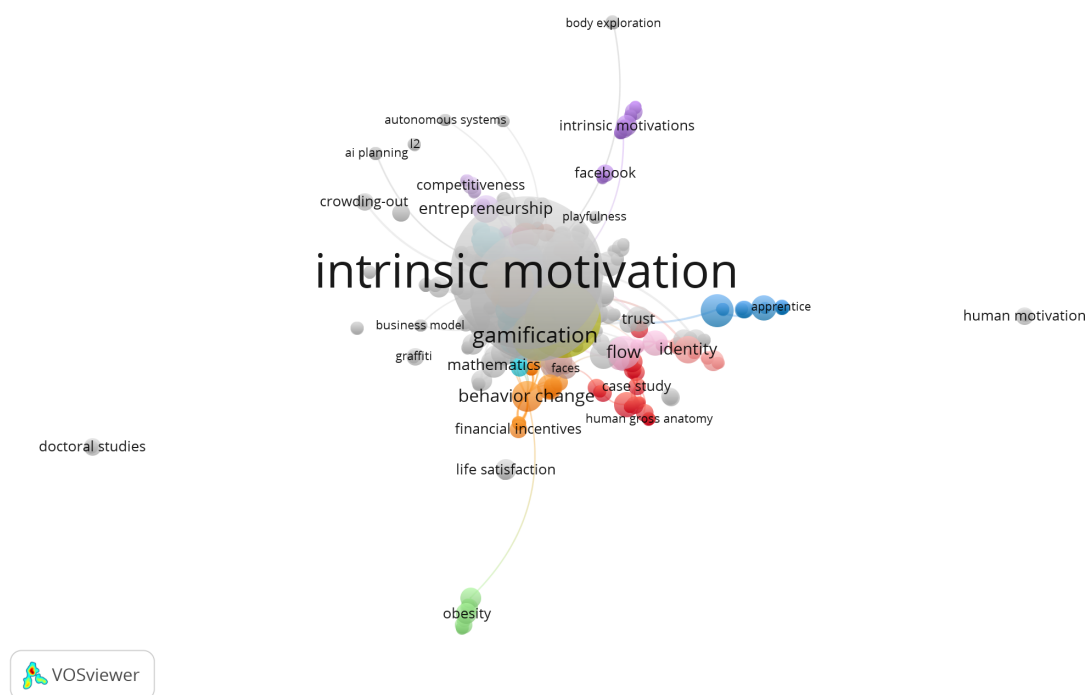

Figure 2 - a VOSviewer depiction of the documents in figure 1 (type of analysis - co-occurrence; unit of analysis: author keywords). 895 connected items are the result.

Figure 3 - A closer VOSviewer look at figure 2, more in-depth. Note the connected keywords

Using the following search terms: Success AND "intrinsic motivation" AND business OR Sport – present in the title, abstract and keywords of the article – we found the following documents, as portrayed in figure 4.
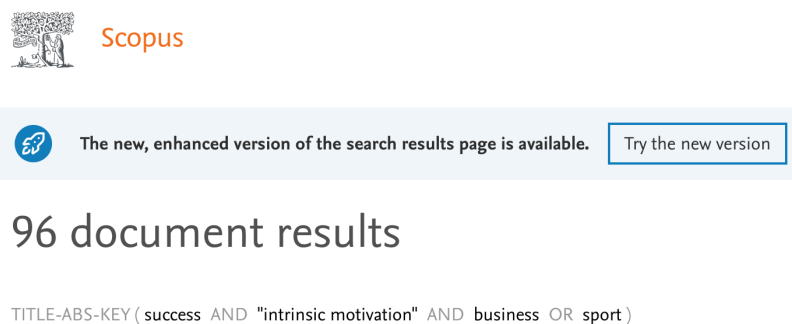

Figure 4 - Using the following search terms in Scopus: Success AND "intrinsic motivation" AND business OR sport – present in the title, abstract and keywords of the article – we found 96 documents.
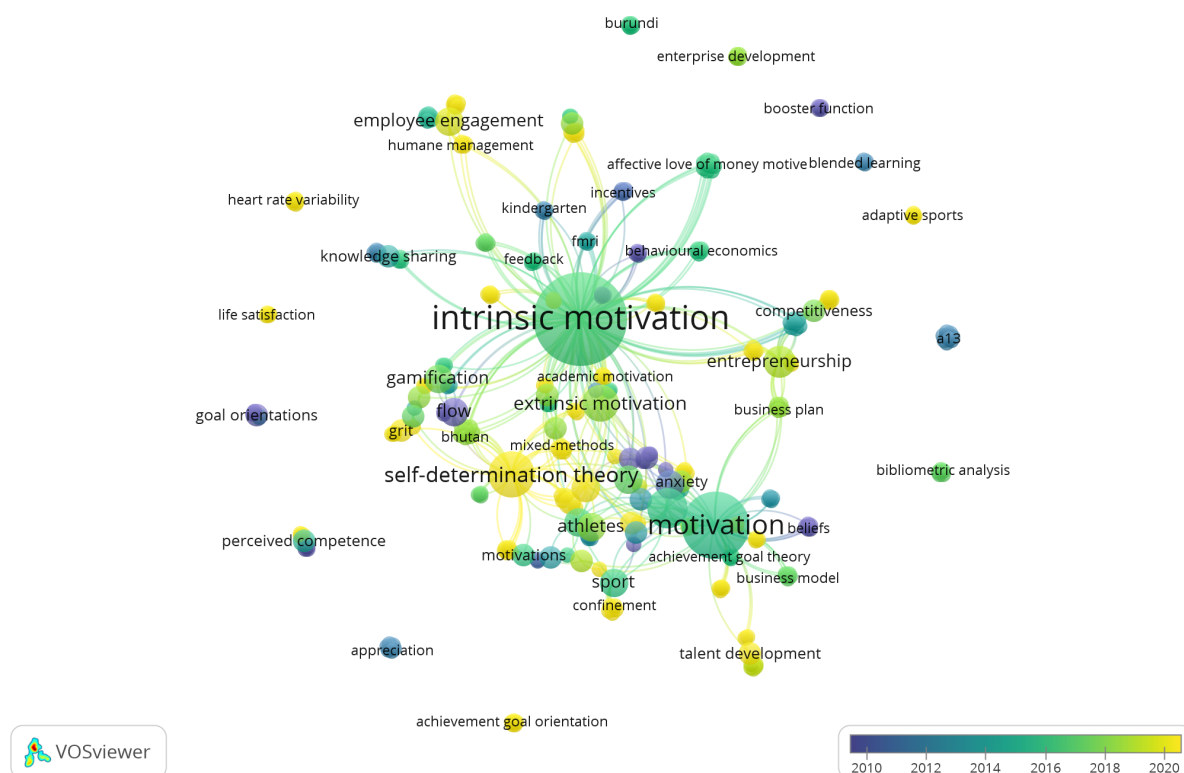
Figure 5 - Using the following search terms in Scopus: Success AND "intrinsic motivation" AND business OR sport – present in the title, abstract and keywords of the article – we generated this VOSviewer figure.

Figure 5 is a VOSviewer depiction of the 96 documents in figure 4 (type of analysis - co-occurrence; unit of analysis: author keywords). 326 items are the result. Figure 6 constitutes a closer look at figure 5, more in-depth.

The following keywords are hence seen to be relevant to the discussion, in figure 6: motivation, intrinsic motivation, extrinsic motivation, self-determination theory, self-efficacy, achievement goal theory, perceived competence, employee engagement, humane management, self-regulation, creativity management, agile organization, entrepreneurship, competitiveness, altruism, decent work, beliefs, grit, and fair play. A definition of some of these key terms follows in table 1.
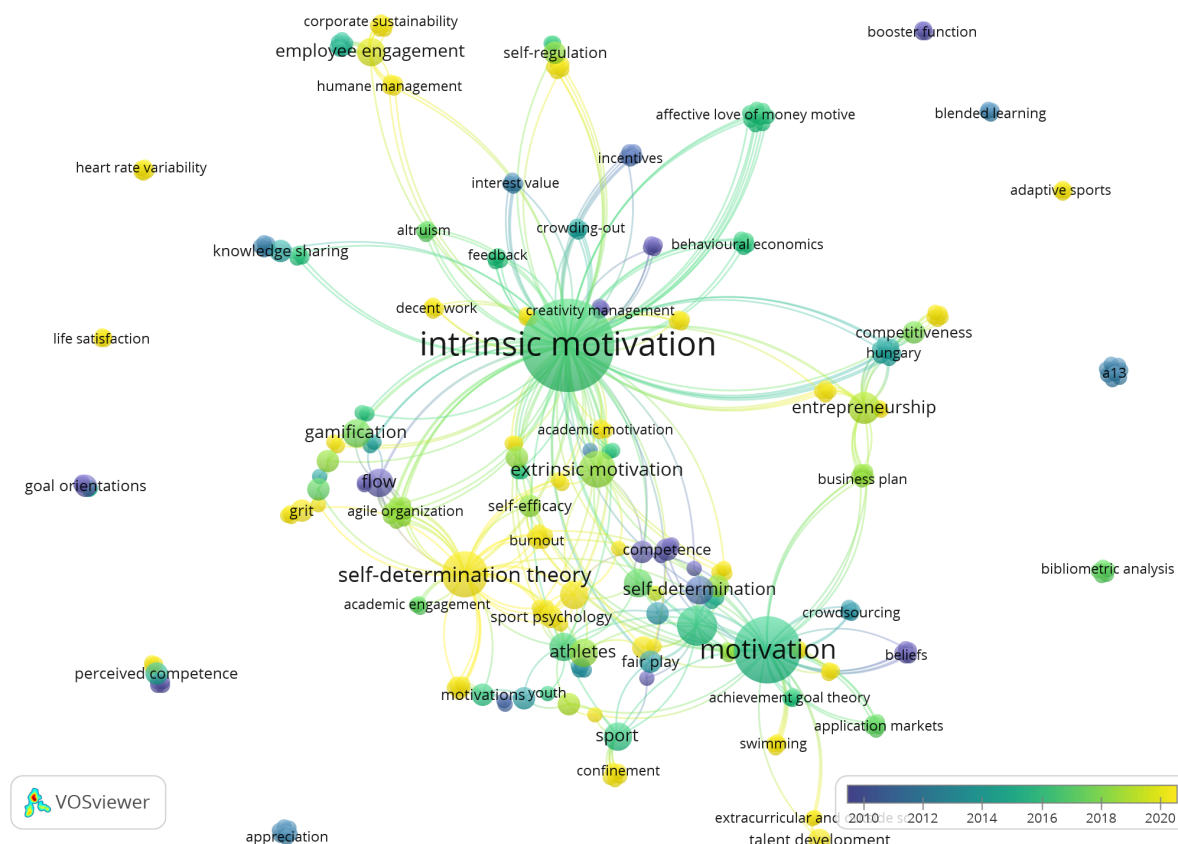
Figure 6 - Using the following search terms in Scopus: Success AND "intrinsic motivation" AND business OR sport – present in the title, abstract and keywords of the article – we here have a closer look at figure 5.

Table 1 - A definition of some key terms

Key term	Definition
Motivation	"Motivation affects human performance, emotion, cognition, behavior, and well-being" (Liu et al., 2023, online article, no page numbers) "While intrinsic interest is universally considered helpful and desirable, the use of instrumental value [extrinsic motivation] is often more debatable." (Liu et al., 2023, online article, no page numbers)
Intrinsic motivation	"Passion and interest - a person's internal desire to do something - are what intrinsic motivation is all about." (Amabile, 1998, pp.4-5). "Joy, interest, liking, exploration, and curiosity-spawning activities are synonymous with intrinsic motivation." (Liu et al., 2023, online article, no page numbers)
Extrinsic motivation	"Extrinsic motivation comes from outside a person - whether the motivation is a carrot or a stick. If the scientist's boss promises to reward her financially should the blood-clotting project succeed, or if he threatens to fire her should it fail, she will certainly be motivated to find a solution." (Amabile, 1998, pp.4-5). "Extrinsic motivation is linked with motives outside of the task. It is sometimes called instrumental motivation (or value) because it involves external components such as instrumental utility, attainment, cost, pressure, and future goals [...]. It is characterized by an instrumental reason for some external purposes and is oriented toward the future. Instrumental motivation is based on the value and

Key term	Definition
	worth that people find important, even when the task is not enjoyable." (Liu et al., 2023, online article, no page numbers) "Though extrinsic motivation can facilitate students' academic performance, everyday life, and school activities in specific contexts of learning, extrinsic reasons can possibly and easily "crowd out" [...] intrinsic motivation." (Liu et al., 2023, online article, no page numbers)
Self-determination theory	"Self-determination theory proposes that humans have three fundamental needs that must be satisfied in order to achieve complete autonomous motivation: autonomy, relatedness and competence." (Benneker et al., 2023, p.2) "Self-determination theory (SDT) has important implications for applications in psychology, education, and organizational management. Emphasis is put on people's inherent motivational propensities for learning and growing and on how they can be supported and internalized by environmental facilitators [...]. While SDT and most other theories favorably evaluate intrinsic motivation, we are less sure whether extrinsic motivation is beneficial." (Liu et al., 2023, online article, no page numbers)
Autonomy	"An important first step during a period of home-based learning will therefore be to make parents aware of the important role they have in supporting autonomy in their adolescents." (Benneker et al., 2023, p.5)
Autonomous motivation	"Adolescents autonomous motivation appear to benefit from parental support of their autonomy. Parent can do this by taking the perspective of the adolescent into account and encouraging them to act upon their own values and interests, while also providing structure and boundaries." (Benneker et al., 2023, p.5)
Competence	"Competence entails feeling effective and confident when pursuing an activity and is widely considered to be fundamental to motivation and achievement" (Benneker et al., 2023, p.2)
Self-efficacy	"Adolescents who feel competent are highly self-efficacious" (Benneker et al., 2023, p.2) "Individuals with high self-efficacy [have the] ability to work harder and persist longer when [encountering] difficulties compared to those who doubted their abilities" (Benneker et al., 2023, p.2)
Relatedness [to others]	"The second psychological need in self-determination theory is to feel relatedness to others." (Benneker et al., 2023, p.2) "Adolescents should be accepted and feel connected to others." (Benneker et al., 2023, p.2)

5. MOTIVATION

5.1. MOTIVATION IS THE CENTRAL CHALLENGE IN THE AGE OF DIGITAL TRANSFORMATION

Motivation is a central challenge in the age of digital transformation for several reasons. Firstly, the fast-paced and constantly evolving digital landscape can be overwhelming and intimidating for some individuals, leading to feelings of anxiety and disengagement. This can make it difficult to motivate individuals to engage with digital tools and technologies (especially if they are older). Secondly, the digital age has brought with it an abundance of information and distractions, making it difficult for individuals to stay focused and motivated. With social media, messaging apps, and other online distractions, it can be challenging for individuals to maintain their motivation and stay on track with their goals. Thirdly, the digital age has changed the way we learn and work, requiring individuals to constantly adapt and update their skills. This can be daunting for some individuals, leading to feelings of inadequacy and discouragement.

To address these challenges, it is important to understand the unique motivations and needs of individuals in the digital age. This may require educators and employers to provide tailored training and support, as well as opportunities for personal growth and development. It may also involve creating a culture that values and

rewards innovation, creativity, and continuous learning. By prioritizing motivation and engagement in the digital age, we can help individuals thrive and succeed in a rapidly changing world.

5.2. WHAT IS THE EXPERIENCE OF MOTIVATION CHANGE IN THE INDUSTRIAL WORLD OVER THE LAST TEN YEARS?

Experiences on the change of motivation in the Western industrial world in the last ten years are diverse and depend on various factors, such as the economic situation, the job situation, the age and the cultural imprint of the people. However, some studies and surveys suggest that motivation in the Western industrial world has tended to decline over the past ten years. For example, a 2017 Gallup poll found that only 33% of workers in the US were engaged and motivated at work. Another Gallup poll from 2019 found that job satisfaction in the US had declined from the previous year. One possible explanation for this trend is the rise of precarious work and insecure employment, especially among younger workers. Job insecurity among young adults in the US has increased sharply since the 1980s. In addition, societal changes such as demographic change and increasing digitalisation can also contribute to changes in work motivation. For example, a 2019 study by the Institute for Employment Research found that older workers in Germany tend to be less motivated compared to younger workers. Overall, it can be said that the changes in motivation in the Western industrial world over the last ten years are diverse and depend on various factors. In order to improve motivation, it is important to address the needs and expectations of workers and to take targeted measures to increase their job satisfaction and motivation.
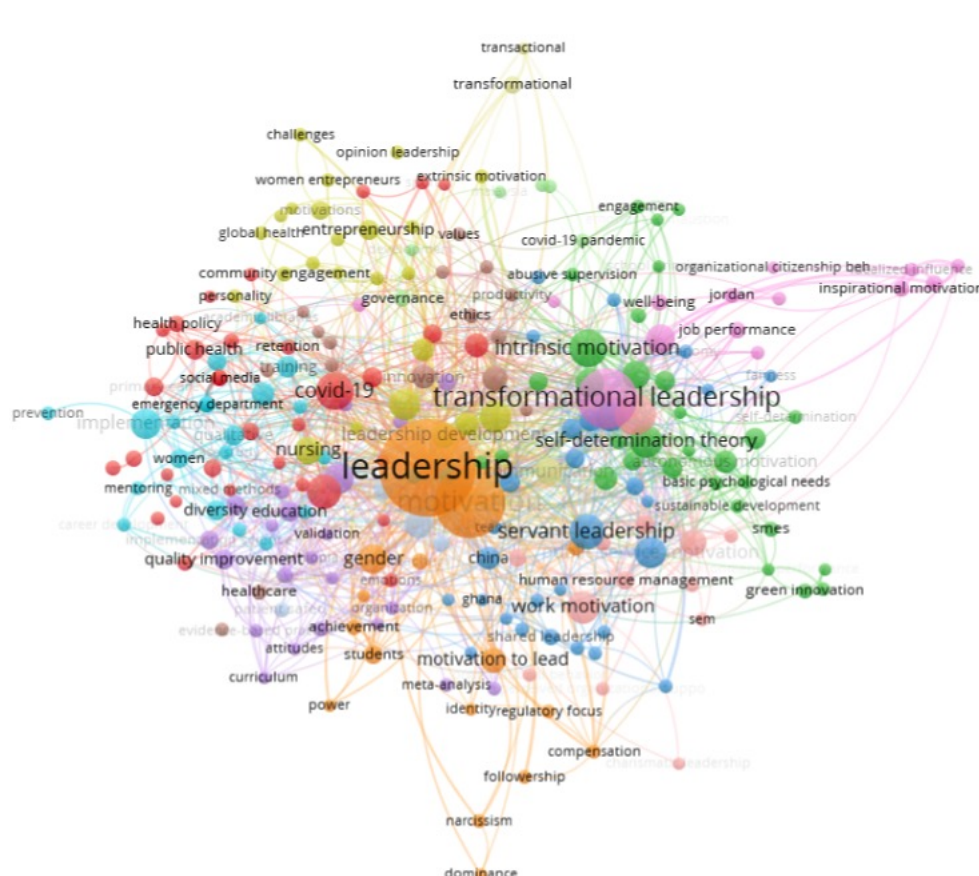

Figure 7 - Relationship between motivation and leadership based on research relevance - VOSviewer figure generated by the authors

The COVID 19 pandemic has greatly changed the nature of leadership (figure 7). The constraints associated with the pandemic have led many companies to move to remote working, which has fundamentally changed the way leaders manage their teams. In a virtual work environment, leaders need to communicate in new ways to ensure that all team members are aware of current information and expectations. In addition, leaders need to be able to motivate and engage their teams in a virtual way to ensure that they continue to work effectively and achieve their goals.

In the virtual work environment, motivating employees can be a challenge. Separation from colleagues, the lack of opportunity for informal conversations and the lack of social interaction can make employees feel isolated and reduce their motivation, despite an apparent preference for at least some distance work.

However, managers can use a number of strategies to keep staff motivated. These include setting up regular virtual meetings to encourage sharing and collaboration within the team, keeping communication clear and consistent, and ensuring that employees have access to the resources they need to do their jobs successfully. Overall, the virtual work environment requires an adaptation of leadership strategies to ensure that staff motivation is maintained. By implementing effective leadership practices, managers can ensure that their teams stay motivated and engaged and successfully achieve their goals.
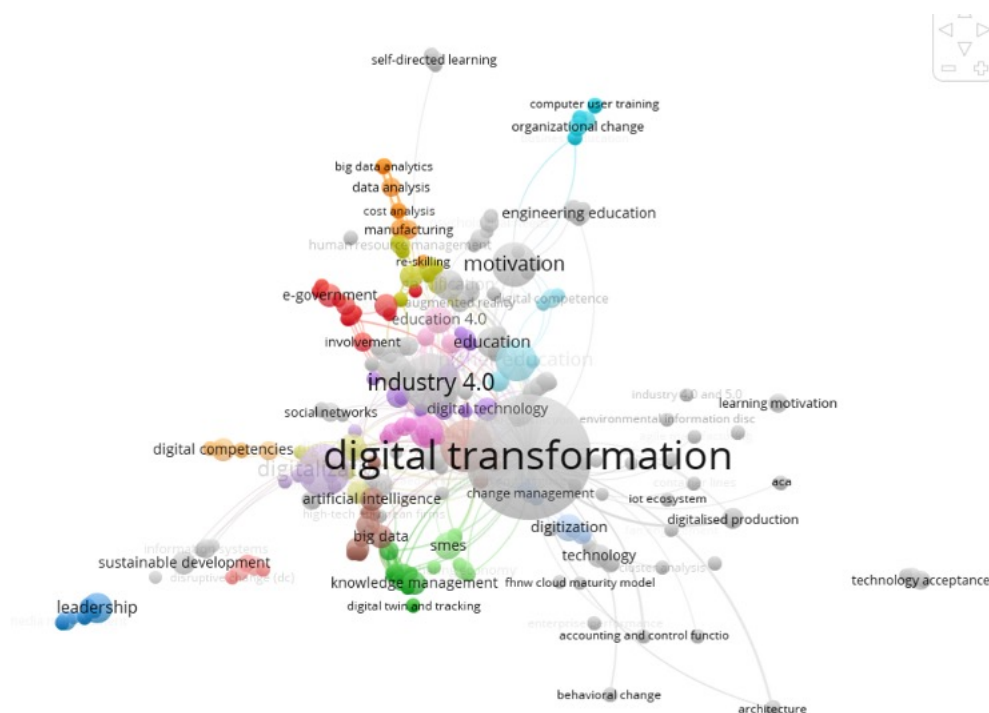

Figure 8 – Connection between motivation and digital transformation on the basis of quotations in articles – VOSviewer figure generated by the authors

The digital transformation has a significant impact on the motivation of citizens as it brings about many changes in the way we live, work, and learn.

On the one hand, digitalisation can have a positive effect on motivation by creating new possibilities and opportunities, such as access to information, networking with other people and flexibility in the world of work. Digitalisation can also help to foster new forms of creativity and innovation, which in turn can be motivating.

On the other hand, digital transformation can also have a negative effect on motivation by leading to overwork and overstimulation, which can lead to feelings of overload and disorientation. The constant availability of information and the numerous distractions through social media and other digital tools can lead to people having difficulty focusing and staying motivated.

In addition, digital transformation can also lead to anxiety and uncertainty, particularly around job losses due to automation and robotics.

Overall, it is important to consider the impact of digital transformation on the motivation of citizens and to take appropriate measures to maximise the positive impact and minimise the negative impact. This includes, for example, targeted training and support measures to promote digital skills, as well as the creation of a culture of innovation and creativity to foster citizens' motivation and engagement.

6. CONCLUSIONS AND SUGGESTIONS FOR FUTURE RESEARCH

Motivation in society (both in sport and in business) has certain limits, which may result from various factors. Some of these limits could be:

Individual differences: people have different personality traits, interests and values that can influence their motivation. It is not always possible to achieve uniform motivation across society as motivation is highly dependent on individual factors. Do people value success over happiness or vice-versa?

Social and cultural differences: Motivation can also be strongly influenced by social and cultural factors, such as social class, ethnicity or cultural conditioning. These differences can lead to different levels of motivation that are difficult to standardise. In a more globalized World we still see cultural conditioning prevailing over organizational objectives, in many cases.

Limited resources: A lack of resources such as money, time or education can limit motivation, as people need to focus on the essentials in order to survive. When people are struggling with basic needs, it can be difficult to maintain motivation for higher goals. Are our human resources in survival mode and hence not able to see the vision of the firm or the whole competitive picture?

External factors: External factors such as political decisions, economic conditions or natural disasters can affect motivation in society. In times of crisis, it can be more difficult to maintain motivation, especially if the future is uncertain. Recent occurrences, the pandemic and major human conflict, have dictated a difficult 21st century, to date. How will people react in different quadrants of society? The growing number of refugees are a current and disturbing reality. As is inflation. New legislation is needed regarding external factors.

These factors represent limits to motivation in society. It is important to consider these factors and set realistic goals to improve motivation in society. However, it is also important to focus on the factors that can be influenced to bring about positive change.

There are still many open questions and areas that could be further researched to develop a better understanding of motivation in society. Some possible research questions could be:

Long-term effects of COVID-19 on motivation: How did the pandemic affect people's motivation in the long term and how can negative effects be minimised? Is another such pandemic expected in the short to medium term?

Motivation at work: How can employers improve employee motivation, especially at a time when the world of work is rapidly changing and becoming more flexible? Is this flexibility an overall job requirement or more of a benefit or reward for good work by employees?

Motivation in education: How can schools and universities increase student motivation, especially with regard to the use of digital technologies and distance learning (including Zoom, which many students perhaps prefer, and Chat GPT, another reality which is of interest to students worldwide)?

Cultural differences in motivation: How do motivational patterns differ in different cultures and how can these differences be used to improve motivation in society? Is one motivated by quality of life or by work? What should be the balance? What is valued in different cultures?

New technologies and motivation: How can new technologies such as artificial intelligence and virtual reality be used to increase people's motivation and what impact do these technologies have on motivation? Will one be motivated to interact with Chat GPT searching for answers to important issues or will this venue be used to rapidly resolve course assignments without further ado? What will the latter do to the learning process?

These questions are just a few examples of possible research directions. Overall, there are many areas where further research is needed to develop a better understanding of motivation in society and to identify targeted interventions to improve motivation.

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