SHIFTING PATTERNS IN GLOBAL FLOWS OF TRADE, CAPITAL, MIGRATION AND INFORMATION

MARINA POPA, PhD.
Academy of Economic Studies of Moldova
REPUBLIC OF MOLDOVA
popa.marina@ase.md

Abstract: Since the beginning of time, the world's economies have been interconnected. These connections have ranged from simple partnerships to complex exchanges of resources. Throughout human history, no country has ever possessed all the resources it needed, making international connections essential. People, trade, capital, and information have always been the key flows driving global interaction, although their evolution varies depending on the global context. In an ever-changing international system shaped by economic, political, and social factors, these flows shift in scale and direction but consistently remain the forces that keep states connected.

Economic flows are reflected in the export and import of goods and services, migration (i.e., the movement of people), technology transfer, information exchange, innovation, foreign direct investment, and the operations of transnational corporations. Without these components, the global economy cannot function effectively, increasing the risk of widening gaps between countries or even their isolation. Therefore, international economic flows are essential for global growth, the development of partnerships, diversification of supply sources, market expansion, and job creation. They are the engine of growth and development.

This article aims to identify the defining features of each type of flow and to demonstrate the importance of the global economic circuit they create. By analysing trade, migration, capital, and technology flows, the paper will justify their critical role in the economies of all countries, regardless of their level of development.

Keywords: global economic flows, trade and investment, international migration, technology transfer, economic interdependence, globalization dynamics, FDI

JEL Classification: F02, F, F2

1. Introduction

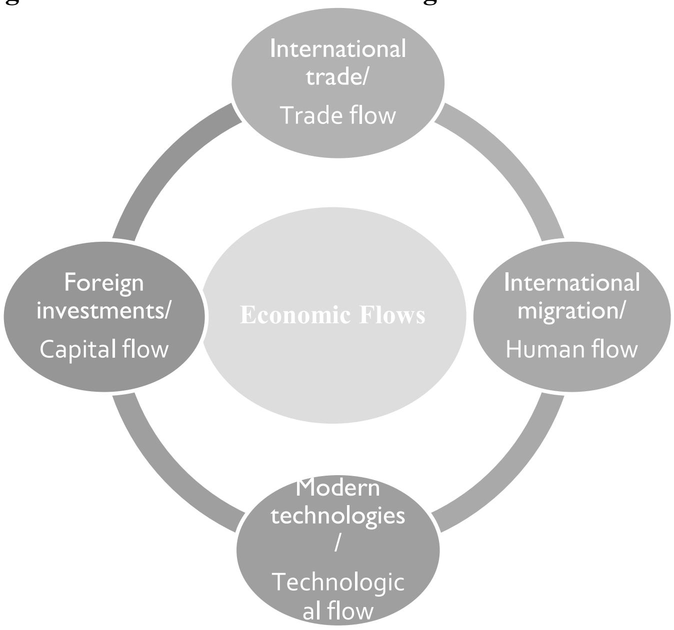
People, values, goods, services, and financial resources play a central role in connecting countries, shaping geopolitical dynamics, and fostering economic development. Despite ongoing military conflicts, economic shocks, and health crises, international economic flows have continued to sustain interdependence among nations. So, International economic flows play a crucial role in connecting the countries of the world, facilitating commercial, financial, human and technological exchanges between national economies. These flows include commercial transactions of goods and services, foreign direct investment, technology transfers, innovations and information. Thanks to these flows, the states cooperate, thus generating an economic growth at the national level, but also globally. Each flow has its own contribution in determining the interdependence between states. For example, international trade, as the first economic flow in establishing relations between states, connects producers and consumers on the same market. Foreign direct investments, generated by transnational corporations, represent another important pillar of international economic flows. They bring capital, innovations, talent, creativity, technological and managerial know-how, contributing to increasing the efficiency and competitiveness of national economies. And the migration flow contributes to increasing the incomes of underdeveloped countries through remittances, exchange of mentality, economic and social policies, this being one of the saving flows in some countries of the world.

In the context of the reformation of the current global conjuncture, international economic flows are becoming increasingly complex and interconnected, reflecting even more their impact on the development of the countries of the world, by creating prosperity and sustainability.

2. Literature review and analysis of key concepts in defining international economic flows and its related elements

To study the impact of economic flows in the world economy, it is necessary to define the theoretical concepts. The methodological and theoretical-scientific support of the article relies on several specific notions, which aim to determine the basic actors in the global circuit, such as international trade, capital flows, international migration, or innovative technologies, researched by a number of authors such as A. Bulatov, G. Ohlin, M. Thorton, S. Clerck, and others. Even if in recent years we have seen a trend towards deglobalization, it is a short-term trend, because no state has the capacity to develop independently, with its own resources alone (Popa, 2023). At the same time, global economic flows are essential for the functioning of economies at the macro and micro scales, for large and small companies. This happens through the activity of transnational corporations, which are catalysts for investment, capital and account for about two-thirds of global exports (McKensey, 2023). Similarly, labor migration continues to be a key issue in the global economy, and information technologies are the path to a new era of development. Hence, the importance of not only monitoring the connection between the flows and their vital contribution to maintaining global prosperity despite all the turbulence. Researchers' interest in the movement of flows dates back to the 16th century, when Richard Cantillon first established the concept of the economic circuit (Thorton, 2004). He saw the economy as an interconnected system of flows between producers, traders, consumers, and landowners (Maldini, 2025). Initially referring only to micro-level relationships, the concept later evolved to include the exchange of goods between countries, and then other economic flows. Years later, the notion of international movement of economic resources has been developed and researched by the Swedish economist Eli Heckscher together with Nobel laureate Bertil Ohlin and others. The essence of the concept is that the different endowment of countries with resources leads not only to their specialization and the resulting international trade in goods and services, but also to the movement of resources between countries (Bulatov, 2023). Given the fact that during the development of the world economy, international flows have intensified, especially under the process of globalization, the world economic circuit is defined as the totality of international flows in the form of goods and services, capital, human and technological flows (Fig. 1.).

Figure. 1 International flows in the global economic circuit



Source: Adapted by the author from researched literature.

The international economic flow is a specific form of manifestation of interdependencies between economic units in different countries, states, and international organizations within the global economic circuit. Alternatively, flows are monetary expressions of economic actions and the effects of events resulting in changes in economic value within a reporting period (Clerck, 2015). Flows can provide complex and multidimensional, tangible and intangible, and providing services such as transportation or technologies. Looking at the four dimensions separately, trade is the first flow of the global circuit, and it comprises the movement of goods and services from one country to another, by crossing the customs borders of that country. Or international trade is defined as the exchange of goods or services between two or more countries, regulated by international institutions, notably the World Trade Organization (Isachenko, 2023). International capital flows are the transfer of financial assets, such as cash, stocks, or bonds, across international borders. They have become an increasingly important part of the global economy in recent decades and are an important source of growth for national economies (OECD, 2025). Another international flow is migration or human flow, which is the movement of a person or a group of people, either crossing an international border or within the same state. Thus, the concepts of international migration and internal migration emerge (IOM, 2025). In recent years, especially as a consequence of the COVID-19 pandemic, technological flows have been bursting in all areas. Technological transfer is the introduction into the economic circuit of specific technologies and machinery, equipment and facilities, hybrids, varieties, breeds, preparations, resulting from research or purchased, in order to increase the efficiency and quality of products, services, processes or to obtain new ones, which are required on the market or by adopting an innovative behavior, including the activity of disseminating information, explaining, transmitting knowledge, consulting (Popa, 2023). On the other hand, economist Arjun Appadurai (Powell, 2011) proposed a framework for understanding global flows based on five dimensions:

- Ethnoscapes – is about the movement of people, including migrants, tourists, and refugees;
- Technoscapes – refers to the global configuration of technology and the flow of technology across borders;
- Financescapes – describe the global flow of capital and money;
- Mediascapes – refers to the distribution of information through various media (i.e., television, internet);
- Ideoscapes – are associated with the spread of ideas and ideologies (democracy, human rights).

3. Methodology

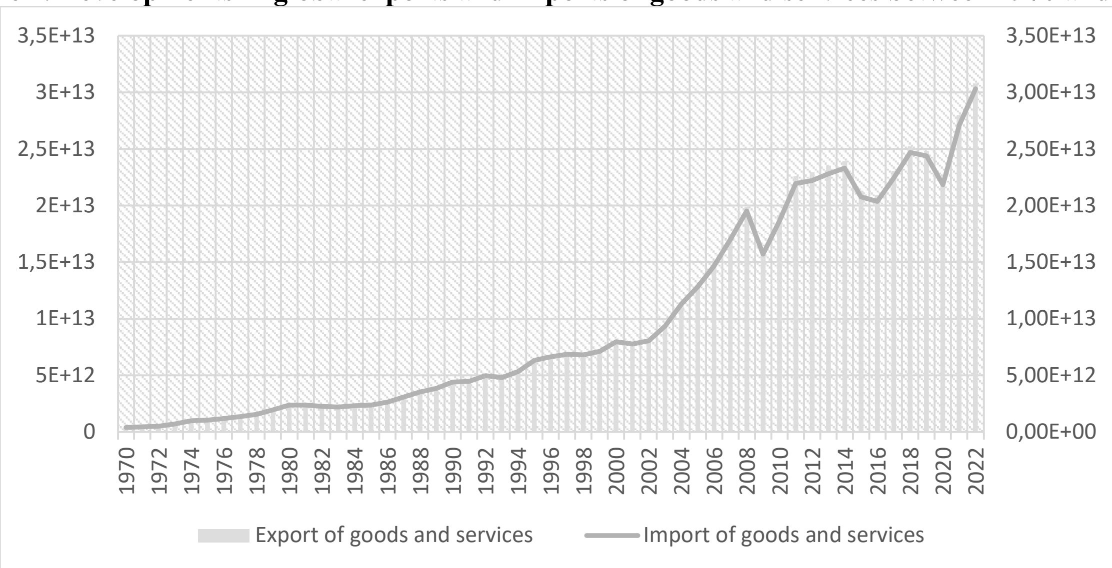
To understand the evolution of flows in the world economy, the author uses several research methods, such as analytical, qualitative, and quantitative, based on data provided by international economic institutions, particularly UNCTAD and the World Bank. Analysis and synthesis allow us to identify the factors that stimulate the development of international flows, as well as their movement caused by various factors arising from changes in the global economy. The author separates the information on each flow, analyzing and studying the causes and effects of each flow. So, our research employs an evolving analysis of the economic flows investigated over the period 2011-2022, using a quantitative assessment based on data from statistics presented by UNCTAD or the World Bank, using indicators specific to these flows. In order to identify the importance of global economic flows, the author analyzes how the global volume of exports, imports, FDI inflows, FDI outflows and other specific indicators have expanded over the period 2011-2022, by investigating the databases provided by international financial institutions.

4. Trade flow research as the primary tool of interaction between states

Throughout history, trade has largely defined the evolution of the world economy. The analysis of international trade is primarily concerned with the trajectory and content of trade: who and what imports and exports. Moreover, trade is subject to various cyclical factors that influence the price and quality of products, the quantity traded or the location of production.

International trade has two components: exports and imports, and the difference between them is the trade balance (Hurduzeu, 2017). This is worth mentioning in order to be able to understand what contribution each of them have in the economic development, and it is through them that interdependence between states is created.Considering that trade is the first flow which determined the connection between countries, it is very important to observe how it has evolved in order to understand how trade relations between the countries of the world have changed. At the beginning of the 20th century, agricultural products represented the main product category in international trade, gradually decreasing from 37% to 12% of total world trade in terms of value. In the post-war period, the share of manufactured goods increases from 47% to about 71% of world trade. In the same period, as a result of the Scientific and Technical Revolution, the share of chemicals and textiles in global trade increases. Between 1980 and 2000, trade in services expanded. The share of world services exports rose from 17% to 30%. Until the financial crisis of 2009, developed countries maintained a high share of world trade, and appears the polarization of trade flows around US, EU, Japan, and China. Transnational corporations become the main participants in promoting trade flows. Then, as a consequence of the development of the circular economy, creative, bio-based goods enter global trade. After 2020, under the influence of Covid 19, military conflicts in various places, serious shifts in global trade flows are happening, and Trump is the president who comes to accentuate these changes even more by changing the US trade policy towards the countries of the world.Since 1970, international trade has shown an upward trend with significant growth rates in volume and value of exported and imported goods. Over the last decade, trade reached an unprecedented level in terms of volume and absolute value, and relative to world output. Thus, from a starting value of trade in goods and services in the 1970s of 2.1 trillion USD, values have grown exponentially, peaking in 2008 at 21.3 trillion USD. The international trade dynamics experienced a substantial impact due to the financial and economic crisis, which started in 2008, and whose consequences were reflected in the value and volume of international transactions in goods and services in 2009. As a result, the value of global trade dropped to 17.2 trillion USD in 2009, reporting a sharp decline. Thereafter, between 2010 and 2014, moderate but steady increases in the value of trade in goods and services were recorded until 2015, when the value of transactions declined by 13% to 23 trillion USD. Over time, trade volumes increased until 2019. And in 2020, the pandemic crisis disrupted international trade flows, leading to an unprecedented increase of up to 31 trillion USD in the value of both exports and imports in 2022 (WB, 2025).

Figure 2. Developments in global exports and imports of goods and services between 1970 and 2022



Source: adapted by the author from World Bank data https://data.worldbank.org/indicator/NE.IMP.GNFS.CD

The main countries participating in international trade are China, the USA, the European Union, and Japan(Table 1).

Table 1. Leading participants in world trade of goods and services in 2022 (million USD)

2022	EXPORT	IMPORT
Total	24 904 375	25 640 775
USA	2 064 758	3 320 880
Japan	746 612	897 803
EU	7 493 996	7 462 675
China	3 584 284	2 747 312

Source: compiled by the author based on UNCTAD data.

So, from this table we deduce who are the main players in world trade. It also clearly shows the global trade competition and the struggle to dominate the world market.

In this context, the tariffs imposed by Trump in 2025 created panic, imbalances and trade wars on the global arena.

The role of trade policies in the development of world trade

Trade policy is fundamental for a country's economic development, influencing the nature, dynamics, structure, and geographical pattern of trade.

***Trade policy** means the totality of regulations adopted and applied by a State (of a legal, administrative, fiscal, budgetary, financial, banking, or foreign exchange nature) aiming to restrict or promote its trade with foreign countries and exposing the national economy to the most acceptable degree of external competition.* (Chistruga, 2016).

Trade policy is also a term that describes the regulations and policies that dictate how economic agents in different countries can trade with each other. Trade policy includes tariffs, import quotas, export constraints, and restrictions against foreign-owned companies operating domestically, etc. Thus, through its trade policy, any government/state aims to achieve the following objectives: to improve its exports and imports commodity structure; to strategically reorient and select its trading partners; and to ensure a dynamic and beneficial balance of trade.

There are three types of trade policy:

1. *Autarchic trade policy* represents a state of economic isolation from other states, inward-oriented to satisfy consumer needs at any price, ignoring the advantage involved in trade with other states. The consumer does not have access to a broad range of foreign products;

2. *Liberal trade policy* is a favorable and open policy towards imports and exports. States can trade freely, and consumers have access to a wide range of foreign products;

3. *Protectionist trade policy* lies between the two extremes and aims to protect certain socially sensitive sectors of the economy from foreign competition. In this policy, the state seeks initially to protect domestic producers, while the access of some foreign products to the local market should be determined by the circumstances of each country and the current international economic situation.

In trade policy, several types of instruments exist to *regulate imports*, both tariff (duties, tariffs) and non-tariff (quotas, certificates, minimum/maximum prices) measures, as well as measures to promote and *stimulate exports* (tax incentives, credit, foreign exchange, fairs, exhibitions). These policies or techniques determine the type of economy and the measures the state struggles with to ensure the prosperity of consumers and producers. Trade is the flow that not only generates international visibility, economic growth, and the creation of jobs. It is the first economic flow that has promoted collaboration between states. Global competition, the battle for markets and power, is initially achieved through trade and then extends to other flows.

5. International Financial Flows, Foreign Direct Investment, and Transnational Corporations

International financial flows assume different forms, such as international loans, remittances, technical assistance, financial assistance, etc. One of the most important categories is Foreign Direct Investment (FDI). When investment involves foreign capital, it is a complex approach.

Foreign (international) investment is the total expenditure made outside the country in industry, agriculture, transport, technology, and different organizations, directly or indirectly, through banks or other financial means.

Portfolio investment (PI) always refers to a purely financial investment by purchasing shares on the financial market. It also include bonds, which are debt securities. These investments are also referred to as passive investments, as the investor does not exercise control over the enterprise and may have only limited influence within the enterprise (Bonciu, 2009).

The largest and most substantial investment flows are foreign direct investment (FDI).

Foreign direct investment (FDI) is a foreign investment by an entity resident in one country made in an enterprise resident in another economy aimed at obtaining a lasting interest;

The United Nations Conference on Trade and Development (UNCTAD) also defines FDI as an investment that involves a long-term relationship and reflects an entity's interest in a foreign economy. The FDI flows have three components:

- Participation in the share capital of a company;

- Reinvested profits;

- o Intra-company loans.

Therefore, FDI represents all the financial, material, technological, and managerial flows that a natural or legal person conducts in an economy other than the one in which it is resident for the realization of a lasting and productive activity through the control of that economy.

Foreign direct investment flows can be:

- *Inflow – the total investments made in a country by non-resident firms, states, or investors during a year;*

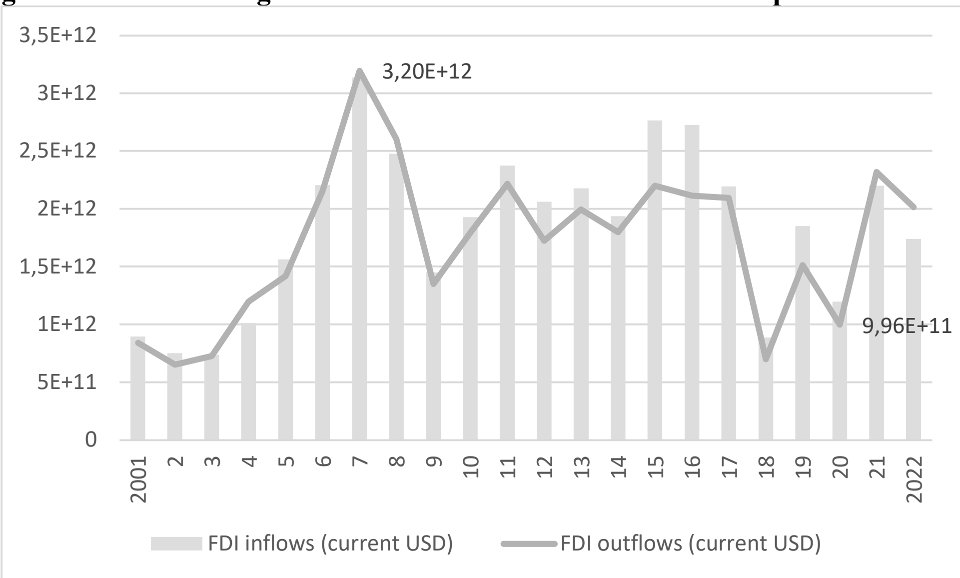
- *Outflow – the total investments made by residents into a foreign country during one year.*

Foreign direct investment stocks represent the value of shareholders' equity and reserves belonging to the investing firm plus the value of subsidiaries' net debts to the investing company.

The evolution of foreign direct investment between 2001 and 2022

Changes in the global economic and political environment have driven the evolution of FDI inflows and outflows. Significant declines were recorded between 2001 and 2003, mainly due to a fall in flows to developed countries (Figure 3).

Figure 3. Evolution of global FDI inflows and outflows over the period 2001-2022



Source: adapted by author based on World Bank data https://data.worldbank.org/indicator/BM.KLT.DINV.CD.WD

In terms of volume, direct investment inflows reached a record level of over 3 trillion dollars in 2007. Foreign direct investment outflows grew along with inflows, rising steadily from 2003 to 2008 until the financial crisis from 2009 severely affected international flows. Between 2010 and 2019, a slight stabilization of FDI inflows and outflows worldwide was recorded, but in 2020, the COVID-19 pandemic strongly affected them with an unprecedented drop. Thus, the volume of FDI inflows decreased from 1.9 trillion dollars to 1.2 trillion dollars. In addition to the 2020 pandemic, during this period, global investment flows were constantly affected by various factors, notably regional military, conflicts, and movements of refugees or illegal migrants.

Regarding the geographical distribution of FDI flows, according to UNCTAD reports, in the period 2021-2022, the largest share of FDI flows was oriented towards Asian countries (662 billion USD), being the most dynamic and attractive region, followed by North America (338 billion USD), and South America (208 billion USD). A catastrophic drop is recorded in Europe (51 billion dollars), the reason being the pressure of conflicts in the region, BREXIT, the difficult recovery from the COVID-19 pandemic, and finally, with the same unstable situation for decades, the African countries (48 billion USD) (UNCTAD, 2024).

The countries with the largest inflows and outflows of FDI are the U.S.A, China, Japan, Germany, Australia, and Canada. The highest investment areas are technology, telecommunications and digital infrastructure, the automotive industry, energy, transportation, and medicine.

Among the most powerful and dynamic participants in the global economy are transnational corporations. Their strength comes from the massive volume of goods and services they handle. In the specialized literature, they are referred to as transnational corporations, multinational companies, or international firms. In the broadest sense, they define those firms that operate outside the borders of their home country through 'production' units controlled to a greater or lesser extent by the 'parent company.' They are the prime promoters of capital flows. The best-known definition of a transnational corporation comes from John Dunning, considered by many experts to be the "father of transnationals," who defines a transnational as "a firm that engages in foreign direct investment and owns and controls value-creating activities in more than one country" (Dunning, 2009).

The United Nations considers that a company qualifies as transnational if it meets the following criteria (Chistruga, 2016):

- turnover volume must be more than 2 billion dollars;
- presence of subsidiaries in at least 6 countries;
- the share of overseas assets should constitute 25% - 30% of the company's total assets;
- 20% - 30% of the turnover volume should come from foreign sales.

According to UNCTAD, today, an estimated 82,000 transnational corporations operate through 840,000 subsidiaries around the globe. They account for a huge share of world exports and GDP and provide hundreds of millions of jobs worldwide.

Every year, changes appear in the number of transnational corporations due to capital concentration. Changes in annual capital flows occur in several ways:

Merger – a concentration technique whereby two or more firms merge into one;

Acquisition by absorption –a technique through which one company fully buys another company;

Acquisition by participation – refers to the acquisition by a company of only a part of the capital of another company.

There are two types of relationships in the activity of a TNC :

1. The transnational company's relationship with the country of origin – is a partnership relationship aimed at promoting the country's brand and increasing revenues for the national budget;

2. The transnational company's relationship with the host country (the country where the parent company's subsidiaries operate) is complex, with a set of advantages and challenges for both the company and the host country (Table 2).

Table 2. The implications of TNCs on host countries

Positive effects	Negative effects
TNCs contributed to the transfer of new technologies in these countries;	Repression of local companies by the TNC 's use of force;
TNCs can provide financial and production means to modernize local industry;	Setting monopoly prices;
TNCs provide jobs for the native population;	Non-compliance (e.g. tax evasion);
TNCs contributed to the qualification of certain socio-professional categories and to the better use of local production capacities;	Pollution of the environment;
TNCs contribute to the attraction of local producers in the process of international specialization;	Destabilization of the situation on the labor market by attracting labor force from local firms to TNC branches through high wages;
TNCs' investments in the economies of these countries have reduced the demand for external loans.	The possibility of TNCs to influence host country government policy.

Source: adapted by the author based of own research

Thus, the flow of capital, together with transnational corporations is essential in the development of the world's economies. They lead to the improvement of production relations, the expansion of the geography of production, the strengthening of economic globalization, and competitive relations at the world level.

6. Human flows, international labor migration and its impact on economic growth

Migration involves the movement of people across national borders. It takes many forms, depending on the factors that motivate people to leave their country of origin. The process of going abroad originated the concept of diaspora, which is the catalyst for human flows by maintaining cultural, economic, and political links with their countries of origin. Diasporas may be a significant factor in shaping cultural identities and transnational bonds. At the same time, remittances are another economic flow in migration, an indispensable source of economic growth for countries dependent on this phenomenon.

Several migration-specific notions are identified.

Emigration is the action or phenomenon of an individual or group of individuals leaving their country or region of birth to settle in another country.

Immigration is the movement of people to another country where they are not natives to settle there to live for an indefinite period.

Brain drain, or brain exodus, is when many highly educated and skilled people leave their country to live and work in another country with better wages and conditions.

Remittances are funds transfered between parties in the form of a voucher, invoice, or even a gift. However, 'remittance' refers more broadly to funds sent by migrants to their relatives in their home country while working and living abroad. These are also known as financial transfers by migrant workers. Remittance means "send back". Most families living in slow-growing economies and developing countries rely heavily on remittances as their main source of income. Today, most money transfers are done electronically, through banks or other financial services.

The human flow is not limited to simple migration. However, international labor migration refers to the movement of the employable population across the borders of one's own country to enter into employment relationships with employers in other countries.

The causes of international migration also determine the influence of the phenomenon on the global economy, expressing its direct impact on the connection between states:

- intensifying the internationalization of economic life;
- uneven development of national economies;
- the integrationist processes in the world economy that stimulate the movement of workforce between associated countries;
- the broadening of the international economic system through the interaction between the two antagonistic blocs until the 1990s: capitalist and socialist;
- the improvement of the global transportation system, which allows information, goods, services, and people to move quickly and freely anywhere in the world;
- social relations, expressed through the internationalization of marriages and cultures;
- the demographic factor, in terms of unequal population growth in the world countries and, correspondingly, the uneven filling of labor markets.

Therefore, the migration process is quite broad and complex, determined by a number of objective and subjective factors that change from one period to another, from one country to another, and even from one social group or individual to another.

Discussing general trends in the movement of people, more people than ever are now living in a country other than their birth country. According to the IOM's World Migration Report 2022, as of December 2020, the number of international migrants was estimated to be around 281 million globally, 60 million more than in 2010. International migrants accounted for 3.6% of the global population in 2020, up from 2.8% in 2000 and 2.3% in 1980 (Table 3).

Table 3. Evolution of the number of migrants by categories in 2019-2020

Indicators	2020	2019
Total number of migrants	281 million – 3.6% of the population	272 million – 3.5% of the population

Women	135 million – 3.5% of the world's female population	130 million – 3.4% of the world's female population
Men	146 million – 3.7% of the world's male population	141 million – 3.6% of the world's male population
Labour force	169 million	164 million
Missing migrants	3900 missing	5400 missing
Remittances	702 billion dollars	719 billion dollars

Source: Adapted by author from data provided by IOM, https://publications.iom.int/system/files/pdf/WMR-2022_0.pdf

While a growing number of individuals migrate out of their initiative, out of a desire to make a difference in their lives, a substantial percentage of them migrate forcibly. The UNHCR (United Nations Refugee Committee) reports that the number of forcibly displaced people globally was 79.5 million at the end of 2019. About 26 million of these were refugees (20.4 million refugees under UNHCR mandate and 5.6 million Palestinian refugees under UNRWA mandate). 45.7 million people were internally displaced, 4.2 million were asylum seekers, and 3.6 million were Venezuelans displaced abroad. It should also specify the sharp increase in the number of Ukrainian and Afghan migrants as a consequence of the military conflicts between 2021 and 2022, with over 6.3 million Ukrainians and 2.3 million Afghans (Hachi M., Popa M., 2022).

We are now in an unprecedented era of mobility, and the need to facilitate orderly, safe, regulated, and responsible migration and mobility is becoming increasingly relevant and mandatory. The need to address the challenges and maximize the opportunities that this mobility brings was acknowledged through the inclusion of migration in the 2030 Agenda for Sustainable Development, which highlights the positive contribution of migrants to inclusive growth and development. Migration features in a number of Sustainable Development Goal (SDG) targets, such as ending modern slavery and addressing the vulnerability of migrant workers. However, the central reference to migration in the SDGs is target 10.7 on facilitating "orderly, safe, secure, regulated and responsible migration and mobility of people, including the implementation of planned and well-managed migration policies" (Vidal, 2022). Hence, current trends in international migration are caused by:

- Migration policy making;
- Developing partnerships between countries and governments;
- Ensuring migrants' welfare and respecting their rights;
- Supporting safe and orderly mobility during crises;
- Promoting regulated migration.

Looking at the current global juncture, international migration trends are shaped by several changes and influenced by:

1. The Russian – Ukrainian military conflict and tensions in the region;
2. The impact of COVID-19 on the global economy and the evolution of its mutations;
3. The active process of economic integration in South America adjusted by the structural and political crisis in Venezuela;
4. The new global economic crisis, triggered by pandemics and the Russian-Ukrainian war, has changed mikgration corridors and asylum policy conditions;
5. Changing the migration order in the USA, with the US administration attempting to change previous migration policies;
6. The fall of the Afghan government and the Taliban's rise to power have triggered massive population movements out of the country;
7. Geopolitical shifts in South-East Europe, etc.

In conclusion, we can state that the process of labor migration will never be static and predictable. Any local, regional, or global change generates strategic alterations in the movement of individuals, which are the consequence of cyclical changes.

7. Innovation and technological flow in the global economic circuit

Today, humanity is developing faster than ever, relying on innovation. Scientists and engineers constantly seek new systems and software to create innovative products. In this continuous development process, technology transfer plays a pivotal role. The whole process of technology transfer comprises scientific, technological, organizational, financial, and commercial steps through which new ideas, products, and operations must pass in any field of the economy. Therefore, the technology transfer flow is largely based on innovations and know-how. Thus, the process of technology transfer is a complex process, which requires in-depth analysis at all stages, starting from the emergence of the innovative idea, including legal protection of intellectual property, the manufacturing of the breakthrough product, to the final stage – obtaining profit from commercialization.

The role of innovation in the world economy

Innovation originates from the concept of novelty and creativity. It is a continuous process resulting from the development and application of new ideas and technologies. It is the engine of economic growth. A growing number of economists are assessing how technology and innovation greatly impact economic growth, directly reflecting on welfare. In these contexts, the potential of an economy to innovate depends on the level of research and development stock, human capital, involvement in international trade, market regulation, and technology transfer. Currently, innovation is supported by access to the internet, investment in research and development, intellectual capital, and the globalization process. At the same time, it is a preoccupation for governments, companies, universities, and civil society.

Innovation has several dimensions. That combines not just economic but also social and cultural aspects, some of which are abstract and not subject to economic evaluation. Indicators commonly used in the empirical analysis of innovation are the tendency towards research and development, the adoption of technologies, patents per worker, and human factor skill intensity.

From the perspective of the G20 (the world's major economies), in collaboration with the Organization for Economic Cooperation and Development, countries with high innovation potential support economic growth and innovative business through the following strategies and objectives: (Popa, 2023)

- Monitoring ICT performance and progress;
- Long-term funding in research and science;
- Boosting innovation to overcome global challenges;
- Stimulating the real potential to step into the Fourth Industrial Revolution;
- Addressing common challenges through international cooperation in science and innovation;
- Increasing the quality of science in academia;
- Nurturing human talent and skills;
- Investing more in scientists and the creative class;
- Promoting national and international student mobility;
- Facilitating mobility of researchers;
- Promoting innovation collaboration between companies;
- Supporting business innovation and stimulating entrepreneurship.

Annually, the World Intellectual Property Organization (WIPO) drafts the Global Innovation Report, ranking 133 countries according to their innovation capabilities. For example, in 2024, new aspects of digital innovation based on artificial intelligence (AI), supercomputing, and automation are identified, as well as deep innovation trends in science driven by biotechnology and nanotechnology (WIPO, 2024).

According to these indicators, Switzerland is for the 13th year the most innovative country in the world. Sweden is in second place and the United States third, followed by the United Kingdom (4th) and Singapore (5th), entering the top 5. Finland (6th) is close to the top 5, and every other Nordic (Denmark 9th and Sweden) and Baltic (Estonia 16th, Lithuania 34th, and Latvia 37th) economy is also on an upward trend, except Iceland, which remains stable at 20th. China ranks 12th, while Japan is in 13th place. Israel (14th) is in the top 15. Saudi Arabia (48th), Brazil (49th) and Qatar (50th) are in the top 50, while South Africa (59th) and the Republic of Moldova (60th) are in the top 60.

8. Conclusions

Following our extensive analysis of global economic flows, we have identified several conclusions:

- ✓ The evolution of international trade has followed an upward trend, with exponential growth rates since the 1970s, in terms of total volume and value of goods and services traded globally;
- ✓ The rise of China, and consequently of Asia, in the world rankings is by far the most notable change in the international trade picture since the 1980s;
- ✓ Technology transfer and innovation are the driving forces in today's global economy. They manifest themselves in human resources with completed tertiary education, exports of IT products, intellectual assets, particularly patent applications, scientific articles of international value, research and development expenditure, and rapid growth in the number of employees in creative-innovative companies;
- ✓ The migration process is quite broad and complex, determined by a series of objective and subjective factors that change from one period to another, one country to another, and even from one social group to another or individuals , with positive and negative effects on both the country of emigration and that of immigration;
- ✓ Foreign direct investment alongside transnational corporations brings economic growth, creates jobs, and diversifies the global product assortment.

These summaries show us that the world is undergoing a profound reshaping, complex and complicated but fully involving international flows. They remain the driving force in the development of states now and in the future. All the connections are reconfiguring, but they remain as strong as ever.

References:

[1] Bonciu, F. (2009) *Economia mondială*. Editura Universitară. București, 2009. 230 p. ISBN 978-973-749-726-0

[2] Bulatov, A., Drynochkin, A. (2023). Concepts and Theories of Global Economy. In: Bulatov, A. (eds) *World Economy and International Business.* Contributions to Economics. Springer, Cham. https://doi.org/10.1007/978-3-031-20328-2_2

[3] Clerck, S. (2015). Economic Flows, Stock Positions, and Accounting Rules. IMF eLibrary. https://www.elibrary.imf.org/display/book/9781498343763/ch003.xml

[4] Chistruga, B. (2016) *Economie mondială și integrare europeană*. Chișinău, 2016, ed. ASEM. ISBN 978-9975-75 806-2, 29,7 c.a

[5] Dunning, J. (2009). Multinational Enterprises and the Global Economy, Second Edition. ISBN 978184376 5257. https://dipiufabc.wordpress.com/wp-content/uploads/2015/06/dunning_multinational-enterprises-and-global-economy.pdf

[6] Hachi, M., Popa M. (2022). Capitolul XII: Tendințe și perspective în evoluția migrației internaționale a forței de muncă. p.207-226 În: *Migrația internațională a forței de muncă* (Note de curs). 2022, 250 p Editura ASEM:, ISBN 978-9975-147-66-8

[7] Hurduzeu, Gh. (2017) *Relații Economice Internaționale. Teorii, Strategii, Politici, instrumente și Studii de caz*. Editura ASE, București 2017. ISBN 978-606-34-0222-7

[8] Isachenko, T., Aleshin, D., Savelyev, O., Soldatenko, D. (2023). International Trade in Goods and Services. In: Bulatov, A. (eds) World Economy and International Business. Contributions to Economics. Springer, Cham. https://doi.org/10.1007/978-3-031-20328-2_32

[9] IOM (2022). *World Migration Report, 2022.* https://publications.iom.int/system/files/pdf/WMR-2022_0.pdf

[10] IOM (2025). *Fundamentals of migration*. https://www.iom.int/fundamentals-migration

[11] Maldini, J. (2025). Richard Cantillon and the Cantillon Effect: How New Money Changes the Economy (and Who Benefits). The Geopolitical Economist. https://medium.com/the-geopolitical-economist/richard-cantillon-and-the-cantillon-effect-how-new-money-changes-the-economy-and-who-benefits-af95334b0a56

[12] McKinsey Global Institute, (2023). Global flows: The ties that bind in an interconnected world. https://www.hinrichfoundation.com/research/article/sustainable/global-flows-the-ties-that-bind-in-an-interconnected-world/

[13] Mosler Vidal, E., Laczko, F. (2022). Migration and the SDGs: Measuring Progress – An Edited Volume. International Organization for Migration (IOM), Geneva. https://publications.iom.int/system/files/pdf/SDG-an-edited-volume.pdf
[14] OECD (2025). Capital flows and investment standards. https://www.oecd.org/en/topics/capital-flows-and-investment-standards.html
[15] Popa, M. (2023). From innovation to innovative business. In: SWorldJournal. D. A. Tsenov Academy of Economics Svishtov, Bulgaria, 2023, Nr. 22 (3), p. 60-72. 0,29 c.a., ISSN (Online): 2663-5712 https://doi.org/10.30888/2663-5712.2023-22-03 , https://www.sworldjournal.com/index.php/swj/article/view/swj22-03-049
[16] Popa, M. Chistruga, B. (2023). Deglobalization and the transition towards a new global economic cycle In*: International Scientific Conference Competitiveness and Innovation in the Knowledge Economy* in 22-23 septembrie, 2023, p. 247-254, Chișinău, ASEM, 2023, ISBN 978-995-75-834-5, 0.25 c.a
[17] Powell, J. (2011). Revisiting Appadurai: Globalizing Scapes in a Global World – the Pervasiveness of Economic and Cultural Power. *International Journal of Innovative Interdisciplinary Research*, Issue, 1/2011. https://globalcity.critstudies.calarts.edu/Appadurai%20scapes.pdf/
[18] Thornton, M. (2006). Cantillon on the cause of the business cycle. https://cdn.mises.org/qjae9_3_3.pdf
[19] UNCTAD, (2024).*World Investment Report 2024.* Investment facilitation and digital government. https://unctad.org/system/files/official-document/wir2024_en.pdf
[20] WIPO, (2024). *Global Innovation Index 2024.* Unlocking the Promise of Social Entrepreneurship. https://www.wipo.int/web-publications/global-innovation-index-2024/assets/67729/2000%20Global%20Innovation%20Index%202024_WEB3lite.pdf
[21] WorldBank, (2025). https://data.worldbank.org/indicator/NE.IMP.GNFS.CD

Acknowledgement: The work of Popa Marina was conducted in the Project " Exploring Return Migration Dynamics in the Republic of Moldova: a Qualitative Analysis". *Project code*: PN-IV-P8-8.3-ROMD-2023-0173, BABEȘ BOLYAI UNIVERSITY, Cluj Napoca and, ASEM, Chișinău, 2024-2026.