Czech Innovation Policy:

"The Country for the Future"

AmCham believes the new research strategy "Czech Republic: The Country for the Future" rightly focuses the government's economic development programs on creating a strong public research infrastructure that generates patented ideas for existing companies, as well as spin-offs. From a managerial perspective, the strategy sets general and specific objectives, identifies tasks, establishes cooperation across functions of the government, and assigns accountability for accomplishing the goals. We therefore view the document as a substantial step toward the Czech Republic becoming a top ten EU economy by 2025, and would like to offer our support in turning the strategy into reality. What follows are some comments and four concrete steps AmCham proposes as our contribution to the strategy.

Objective. Precisely measuring the objective is essential to making a strategy successful. From the introductory presentation on February 18, we understand the goal to be to increase the importance of Czech research in global research, as well as to increase its contributions to Czech economic prosperity. To determine the role of Czech research accurately, we suggest measuring Czech research expenditure as a percentage of EU research expenditure both nominally and on a per capita basis. The combination of a total and per capita comparison sets a benchmark for our research against our primary competitive market. We believe we should set a target of doubling Czech expenditures on research from 1% to 2% of the total. To achieve that on a permanent basis, we also believe that private investment into research must be twice that of public investment.[1]

Markets. To make increased expenditure on research sustainable over long periods, markets must be expanded for purchasing that research. Research has three primary markets: universities, government, and business. Universities tend to buy professors who generate new ideas through basic research. They do this to make their universities more attractive to students (particularly international students) and to build the capabilities of their research programs. Businesses focus primarily on applied technology that make their products more competitive. Governments play a critical role of fusing basic and applied research through programs that enable them to achieve policy goals. The AVX presentation on February

[1] Many indexes use Research as % of GDP as a measure of its influence on an economy. Theoretically, research should improve the value-added output of an economy. In other words, every koruna spent on research should achieve at least an economic output higher than 1 koruna. In an effective research strategy, then, the measure of excellence in research should be a lower percentage invested in research as a % of overall output. In addition, external variables can distort the measurement: an economic recession could increase the proportion even if the actual level of spending remained the same. Finally, the indicator does not provide a useful benchmark against other countries.

18 illustrates how government "market-making" works. In the AVX case, the US government made investigating Mars a government policy objective, and procured both public and private research in order to achieve that objective. As a result, AVX Technologies in Lanskroun was paid to carry out research and produce a new capacitor. By creating a market for new technology, the US government increased the private technological capacity of AVX and the public research capacity of the Czech Republic (the workforce of AVX in Lanskroun). We expect that the role of the Czech government as an initial market-maker will be a key factor to achieving the goals set forth in this strategy.

Management. Due to the restrictions of the laws on public administration, the strategy cannot contain one vital managerial tool: incentivizing people. The head or key employees of an agency, for instance, will be paid the same salary whether the strategy succeeds or not. It might be useful to find ways to reward delivery of the aims on a personal or agency level.

AmCham contributions. We want to do what we can to make this strategy a success. To start, we will work on the following four initiatives:

1) Developing "vizitky" for patented, commercially viable research generated by Czech public research institutes or universities. In discussing university research with potential private investors, we discovered that the research was often not presented in a way that creates initial interest. To overcome this, we will work with universities to prepare introductory material that will increase the chance of a positive first response. We will share these "vizitky" with Czech government.
2) We will contribute to the digitization of public services critical to the achievement of the research strategy.
    a. **Logistics.** We will work with the Ministry of Transport streamlining the construction of maintenance of the road and rail logistics, as well as optimizing the flow of traffic within those networks. This is essential for the delivery of product as well as the distribution of workforce throughout the country.
    b. Immigration. The time to process immigration application could be cut significantly by a full digitization of the process (to eliminate time lost, for instance, by mailing hard copies from embassies to Prague). Furthermore, the integration of workforce demand information through digitization could allow the government to introduce a precise, points-based system that ensures the economy continues to grow in a way that ensures the continued growth of Czech citizen's wages.
    c. Construction Permit Process. While not all of the delays in construction are due to administration, a digitized process that integrates all agencies involved in permitting construction could significantly reduce the time and effort necessary.
    d. Medical Disease Registries. Disease registries should become a fundamental tool for managing the health care system. Many registries have achieved high standards of quality, and can be used to determine the most effective treatment methods. We would support all registries achieving this level of quality, and that the registries be used as a comparative tool for allocating resources within the healthcare system.
3) Recruiting "big bets". We must acknowledge that Czech research faces the challenge of upgrading a public research infrastructure that has suffered from low investment for many

decades. To improve our competitive position in the EU, we cannot make the incremental investments that Germany or Sweden makes annually: we need to make exponential investments that rapidly develop both research and commercial capabilities in advanced technologies. The Czech government cannot pay for all of this: exponential investment requires major private sector investment. As much as start-ups play a role in the long-term success of the country, they lack the resources to make substantial, multi-year investments in university laboratories. For that, we need to attract global companies that are willing to share the cost of making major advances in both the knowledge and technical capacity of the public infrastructure. We will work with the Czech government to identify and recruit those investors.

4) **Advising Start-ups on US and global business market.** We will work with Czech Invest, JIC and other government agencies, as well as private venture capital firms, to share knowledge and experiences in developing foreign markets, and will work to assist them in identifying opportunities.

We welcome your comments on our plans, and we look forward to working with you to fulfill the aspirations expressed in Czech Republic: The Country for the Future.

Our congratulations for articulating this goal, and providing the political and expert leadership to shift the Czech economy toward the next stage of its development.