A buzzing network of trade and travel developed from the 8th century onwards in Muslim civilisation. Entrepreneurial men and women travelled thousands of miles across Africa, Asia and Europe, exchanging ideas, inventions and goods. Their accounts of the lands they travelled across. These accounts precede those of Marco Polo by many centuries.

Knowledge and experience grew in cities from China in the east to Spain in the west, shaping every aspect of life.

Did you know?
The English word cheque comes from the Arabic sakk, a written vow to honour the payment for merchandise when the destination is reached. The first cheques date from the time of Caliph Omar who ruled from 634 to 644. According to 9th-century historian Ibn abd al-Hakam, the cheques were used to pay for grain in Egypt.

Agricultural revolution

Farmers devised, adapted, and improved agriculture in Muslim civilisation, increasing crop yields and productivity. They planted fields in rotation, used nature-friendly methods to combat the soil, and also introduced many new crops. Sugar, cotton and bananas were among the species brought from the distant east. Farmers planted them in experimental gardens and adapted them to the climates in the western part of the Mediterranean world. Many of these crops subsequently transformed the economies of the countries that were their new homes.

The contributions of rulers, soldiers, traders, and most of all farmer scholars like al-Walid, Ibn Bassal, Al-Tighnari, and Ibn al-Awwam, were crucial to this agricultural development.

Raising water

Waterwheels (norias), pumps and other forms of water-raising devices spread across the medieval Muslim world. Better ones can still be seen in Sivrihisar in Sivas and Hama in Syria.

Al-Jazari designed an animal-powered water-raising machine that worked using gears and a scissor crank mechanism which converted circular motion into linear motion. He developed the first double-acting reciprocating suction pump with a crank connecting rod-piston system.

Taqi al-Din was another inventor who expanded Al-Jazari’s double pump into a six-cylinder pump with pistons synchronized by a cam shaft to provide continuous water output.

Coins

In the early 7th century, the Umayyad Caliph Abd al-Malik ibn Marwan reformed the way in which coins were created and produced. He minted his coins, called dirhams, in gold and inscribed the coins with a verse from the Qu’ran. The new coins had a strong political meaning. People had previously used many different kinds of coins minted by other rulers, and Abd al-Malik saw the new currency as an opportunity to help unify the Muslim world. As centuries passed by, Muslim countries departed from this tradition.

Windmills

Windmills were built widely in eastern Muslim lands a thousand years ago. The geographer Al-Masudi wrote of seeing windmills used to pump water for irrigating gardens.

Al-Jazari

Al-Jazari was an early 13th-century engineer from Diyarbakir, south-east Turkey. He wrote an illustrated book on mechanical devices which described 50 machines. He used technical terminology, and provided manufacturing instructions.

Glass, ceramic and paper

Glass-making in all shapes and colours thrived in the cities of Alexandria, Cairo, Tyre, Nicosia, Antioch, Damascus, Tripoli, and al-Sham. Paper, for instance, became famed for its set of controlling plans that reached to peace of cordiality in the 13th century.

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