Introduction:

In 2017, the Brookings Institution (BI) published a study that created a digital scoring system for most of the detailed occupational classifications used by US statistical agencies. The goal of the scoring system was to determine the level of digital skills required for employment in each of the occupations. Occupations were grouped into three categories based on the study:

High Digital Skills Required: Scores of 60+
Medium Digital Skills Required: Scores between 33 and 59
Low Digital Skills Required: Scores of 32 and below

This short paper is a briefing on our efforts to better understand how digital skills affect our labor markets. Our methodology applied the scores developed by BI and matched them with occupational wages estimates from the BLS OEWS program and long-term employment projections. BI published scores for most occupations and we used a simplified process to assign scores to the remaining ones. Occupational scores ranged from a low of nine (Structural Iron & Steel Workers) to a high of ninety-four (Computer Programmers).

Occupational Employment:

After matching the digital scores with our long-term occupational projections (2018 to 2028) we found the following:

High Digital Skills: 184 occupations
Medium Digital Skills: 321 occupations
Low Digital Skills: 102 occupations

	2018 Employment	2028 Employment	Change	% Change	Average Annual Openings
High Skills	445,800	460,350	14,550	3.263795	44,360
Medium Skills	822,100	843,030	20,930	2.545919	97,000
Low Skills	437,510	468,000	30,490	6.968984	62,920
Total	1,705,410	1,771,380	65,970	3.868278	204,280

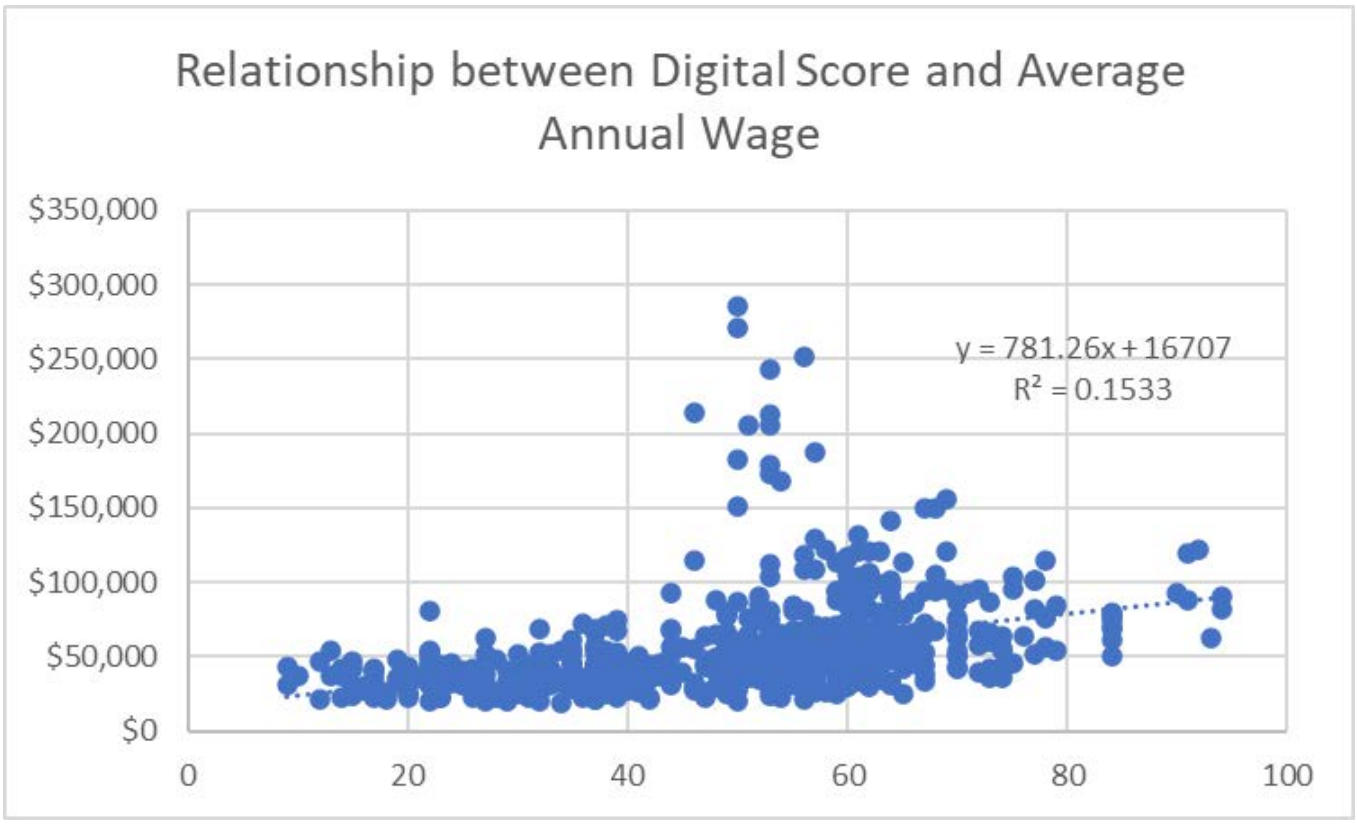
Almost three-quarters of Oklahoma jobs require at least medium level digital skills and over 140,000 job openings each year require the same. In addition, the BI study confirmed that the requirements for digital skills were increasing rapidly over time within most occupations.

Occupational Earnings:

Using data from our BLS OEWS unit, we were able to create estimates of the average annual earnings of each of the three skill classifications. Not surprisingly, the state's labor market rewards the those with higher digital skill sets with more compensation.

	Average Annual Income
High Skills	$65,913
Medium Skills	$45,355
Low Skills	$31,634

The chart below shows the relationship between average annual wages and the digital skill score by detailed occupation.



There is a positive but weak relationship between an occupation's digital score and its average annual wage as estimated by the BLS OEWS program. Each additional point in a digital score is associated with an extra $781 in annual earnings. As can be seen with a quick glance at the chart there are several well-paying occupations with mid-level scores. These are thirteen medical provider occupations (Medical Doctors, Dentists, Nurse Anesthetists, etc.). There are an estimated 8,290 jobs within these occupations with

average annual earnings exceeding $200,000 but with a digital score average of only fifty-one. If they are removed from the analysis, then the statistical relationship between higher digital scores and higher average annual incomes nearly doubles.