

The study of factors affecting the adoption of the cameras by professional photographers in Pune

(A comparative study between Mirror less camera & DSLR Camera)

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Abstract

This research is based on a current topic in applied marketing that focuses on a comparative study between mirrorless camera and DSLR camera. The goal of this study is to investigate and identify the factors affecting the adoption of the camera by professional photographers and to conduct a thorough analysis of the perspective of professional photographers towards new technology. This research is particularly significant for professional photographers since new technology is introduced in the field of photography. The main result of the comparative study is that image quality is the most important factor that professionals consider while deciding whether to purchase new technology.

Keywords: MirrorLess Camera , DSLR Camera , professional photographers , technology

Purpose of the study

To identify the factors affecting the adoption of the camera by professional photographers and to investigate the perspective of professional photographers towards new technology.

Significance of the study

This research paper focuses on technology concerns which are based on a current topic in applied marketing. By conducting this comparative research on mirrorless camera, the photographers will get the standing of mirrorless camera in photography space and what are the factors which are affecting the professionals to adopt new technology.

Introduction

Photography is an essential field. From capturing simple yet breath-taking photos of nature to the advertisement hoarding of a business, it all comes under the roof of photography. One of the most celebrated photography genres is commercial photography where most of the professionals thrive. Commercial photography comprises of advertisement photography, fashion photography, etc. Since the dawn of photography on recording medium, we have come a long way. Presently, photography is vital in many fields, such as marketing, advertisement, shopping, etc. Photographers come in all forms, from photographers who do photography just as a hobby to professionals who make it their career.

Photography is the art of capturing light creatively with a camera, usually via a digital sensor or film, to create an image. The camera is the most crucial part for any kind of photography. The key to becoming better at photography is to know which the right camera is in the right condition. Currently, the camera market in the world is filled with different types of cameras such as DSLRs and Mirrorless cameras. Both the camera system is essentially the same with some key differences.

Both systems work on the interchangeable lens mechanism in which you can switch different lenses for different scenarios.

In 1991, Kodak introduced its first DSLR camera to the world with the shift from the traditional film as a recording medium to the digital imaging system (image sensor). As a result of this shift from traditional film, image sensors can instantaneously record images on the memory card. Since then, we have come a long way. From the introduction of the first DSLR to the present day, DSLR cameras are the most renowned cameras in the digital camera market due to the performance and dynamic range of DSLR.

A **digital single-lens reflex camera (digital SLR or DSLR)** is a digital camera that combines the optics and the mechanisms of a single-lens reflex camera with a digital imaging sensor. The reflex design scheme is the primary difference between a DSLR and other digital cameras. In the reflex design, light travels through the lens and then to a mirror that alternates to send the image to either a prism, which shows the image in the viewfinder or the image sensor when the shutter release button is pressed. The viewfinder of a DSLR presents an image that will not differ substantially from what is captured by the camera's sensor as it presents it as a direct optical view through the main camera lens, rather than showing an image through a separate secondary lens. (*Wikipedia*)



Advantages of the DSLR camera:

- They perform well in low light environments.
- They have fast autofocus, which is great when shooting subjects such as animals, people dancing, or any type of motion.
- It's easy to find lenses and other accessories for DSLR as they've been popular for so long. This, however, may not remain the case forever.
- Long battery life. A quality DSLR can take over 1,000 shots per charge, some as many as 2,000.

Disadvantages of the DSLR camera:

- They can be heavy and bulky, which is a limitation if you're moving around a lot.
- They can be loud, which can be disruptive in certain settings.
- They don't produce the best quality video images, so they aren't ideal for video projects or if you're doing both photos and videos. (*Tavit, 2021*)

A mirrorless interchangeable-lens camera (MILC) or simply mirrorless camera, also called digital single-lens mirrorless (DSLM) or electronic viewfinder interchangeable lens (EVIL) camera, is a photo camera featuring a single, removable lens and a digital display. The camera does not have a reflex mirror or optical viewfinder like a digital single-lens reflex (DSLR) camera. Many mirrorless cameras retain a mechanical shutter. Like a DSLR, a mirrorless camera accepts any of a series of interchangeable lenses compatible with its lens mount. (*Wikipedia*)

Advantages of the mirrorless camera:



- **Lighter to carry:** A mirrorless camera is usually smaller and lighter than a DSLR, a major advantage when you're moving around carrying equipment.
- **Cost efficient:** One of the biggest advantages of a mirrorless camera is that you can often get quality that's comparable or superior to DSLR at a lower price, often by several hundred dollars.
- **Tracking:** While autofocus in DSLR can be quite good, the tracking ability of mirrorless cameras can be even better for capturing motion. This is especially good for athletic events, wildlife, or other fast-moving subjects.
- **Less noise:** A mirrorless camera has a silent shutter, which helps you keep a low profile and not disturb your subjects or people at an event.
- **Great video quality:** It's widely believed that the future will be largely dominated by video. With mirrorless, you can get high-quality videos even at the lower end of the pricing spectrum.

Disadvantages of the mirrorless camera:

- Take longer to start up. While this depends on the model, DSLR cameras usually start up immediately while mirrorless models take a while. This is not a major issue unless you want to capture something quickly and your camera is not on at the time.
- More difficult to find lenses. As mirrorless camera is still new, you cannot yet find the variety of lenses that you can easily get for DSLR. This will soon change, though.
- Shorter battery life. The current generation of mirrorless cameras cannot match DSLRs in battery life. You may only get around 400 shots per charge as opposed to the 1,000+ with a DSLR. (*Tavit, 2021*)

Currently, the digital photography industry is in full swing in its transition from DSLR to mirrorless cameras. This shift is happening due to the advantages of size, weight, and image quality of

mirrorless cameras. A major contributing factor in this transition from DSLR to mirrorless is the new in-built focusing system. Mirrorless cameras are relatively smaller, lighter compared to the bulky DSLR counterparts. In DSLR cameras there is a mirror placed at 45 degrees between the lens and camera sensor. In a mirrorless camera system, this mirror is absent; because of this mirrorless camera systems can get smaller and lighter.

Literature Review:

The author shared his thoughts about the two camera systems as well as about switching to a new camera system (mirrorless camera system). He strongly believes that mirrorless is way to hyped up at this moment. He thinks that mirrorless can beat DSLR probably when it comes to video. Later, in this article, he has studied and analysed mirrorless cameras (Canon R5) and DSLR (Canon 5D MK IV). A Mirrorless camera is a marginally better choice but still, he thinks that DSLR is strong and still performs incredibly well. (*Ovchar, I. 2021*)

According to writer, he talks about the current situation of switching between mirrorless cameras and DSLR cameras. In his blog, he has talked about the Pros and cons of DSLR cameras as well as Mirrorless cameras. After analysing all the above aspects of the advantages and disadvantages of both the camera systems, he made the statement that it is viable to shift for mirrorless cameras over DSLR cameras. (*Tavit, 2021*)

According to writer in his article, the mirrorless camera has brought significantly a range of game-changing technical innovations. Features such as silent shooting, and enhanced low light performance, plus a range of faster, lighter, and brighter lenses made possible by new-generation design have highlighted the advantages of mirrorless cameras. He thinks various professionals are welcoming mirrorless who are working in genres like wedding, portrait, or documentary photography but the supremacy of the DSLR remains undiminished for photographers shooting sports, wildlife, or other genres involving fast action. Later, he discussed some aspects such as Electronic Viewfinders (EVFs) and autofocus chips. He thinks that “the next generation, who grow up with mirrorless cameras will consider them the norm but many establish photographers will stick with what they know.” The DSLR is still very much alive and kicking as he concluded his article. (*Clark, D. 2022*)

Objectives for study

1. To identify the factors affecting the adoption of the mirrorless camera by professionals.
2. To investigate the perspective of professionals towards the mirrorless camera.

Hypothesis

- Irrespective of the factors affecting adoption of new camera technology, the inclination of professional photographers is still towards DSLR camera.

Research Methodology:

Quantitative research methodology is used to conduct this investigation.

- Sample size: 40
- Sample Area: Pune, Maharashtra, India
- Sample group: People from the photography field & allied fields.
- Sample Age: 18 and above
- Research methodology: Descriptive and Quantitative.
- Research tool: Questionnaire

Data analysis:

During the course of research, the researcher put various questions to the research participants. The responses received from them can be seen as under:

Q.1

40 participants participated in the survey which was conducted by the researcher. According to this survey, the researcher asked participants about digital camera systems which they are using for their professional work. 23 (57.5%) participants said that they use DSLR camera system whereas 17 (42.5%) participants said that they use Mirrorless camera system.

What type of camera do you use?

40 responses

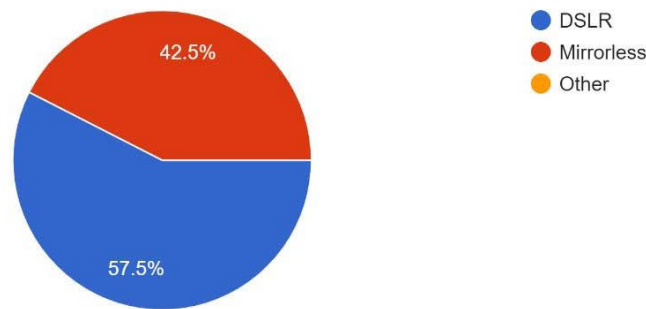


Fig. 1. (Percentage of using Cameras)

Q.2

Further, the researcher inquired about why they use DSLR camera system? Out of all participants who participated in the survey and who use DSLR for their professional work, 11 (27.5%) participants said they use DSLR camera system because of fast autofocus. 16 (40%) participants said that they use DSLR because of the advantage of long battery life. 21 (52.5%) participants said because of wide range of lenses, they use

Why do you use DSLR cameras?

40 responses

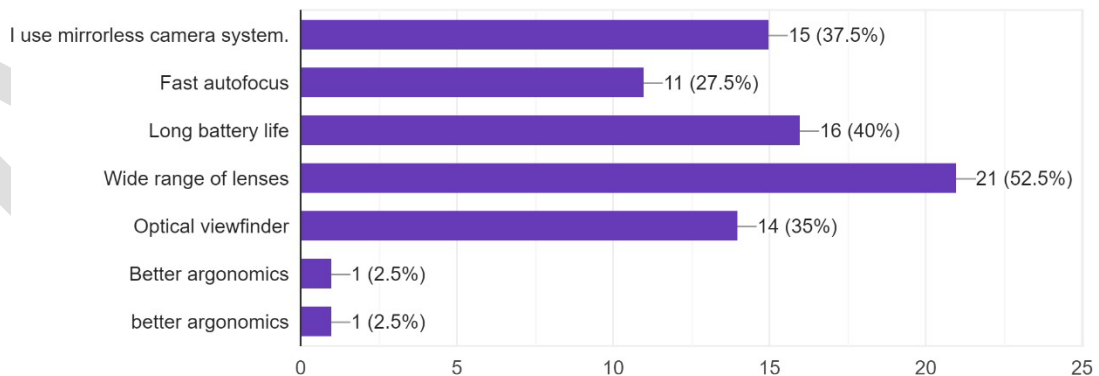


Fig. 2. (Percentage of using DSLR Camera)

Q.3

For the next question, the researcher asked about why they use mirrorless camera system? Out of all participants who participated in the survey who use mirrorless camera system for their professional work, 16 (40%) participants said they use mirrorless camera system because of lightweight. 14 (35%) participants said that they use mirrorless because of the advantage of silent shooting. 16 (40%) participants said because of good quality video feature, they use mirrorless camera system. 14 (35%) participants said electronic viewfinder as well and 1 (2.5%) participant said that they use this camera system because of its better ergonomics and on the last out of all participants, 22 (55%) participants said that they use DSLR camera system.

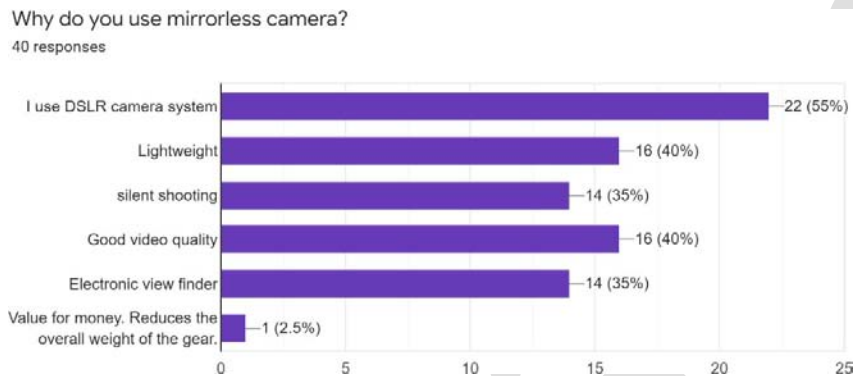


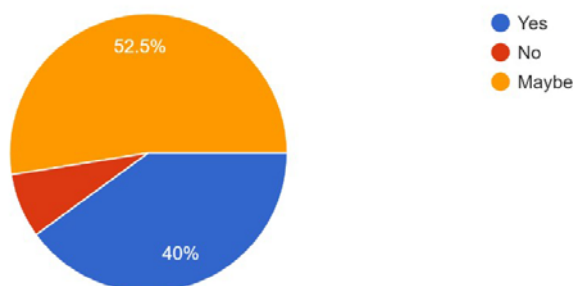
Fig. 3. (Percentage of using mirrorless camera)

Q.4

Later in this survey, the researcher asked all participants about whether mirrorless camera system help photographers to achieve better results compared to a traditional DSLR camera system. On this question, out of 40, 21 (52.5%) participants said that mirrorless camera system might be helpful for photographers to achieve better results than DSLR camera system. 16 (40%) participants thinks that they can achieve better results by DSLR camera system than mirrorless camera system whereas 3 (7.5%) participants thinks that they can achieve better results by DSLR camera system than mirrorless camera system.

As a photographer, do you think that a mirrorless camera system will help photographers to achieve better results compared to a traditional DSLR camera system?

40 responses



Q.5

Later in this survey, the researcher asked all participants about whether mirrorless camera system better than traditional DSLR camera system. On this question, out of 40, 24 (60%) participants said that mirrorless camera system better than DSLR camera system. 13 (32.5%) participants thinks that mirrorless camera system can be better than DSLR camera system. Whereas 3 (7.5%) participants thinks that DSLR camera system better than mirrorless camera system.

Do you think that a mirrorless camera system is better than a DSLR camera system?

40 responses

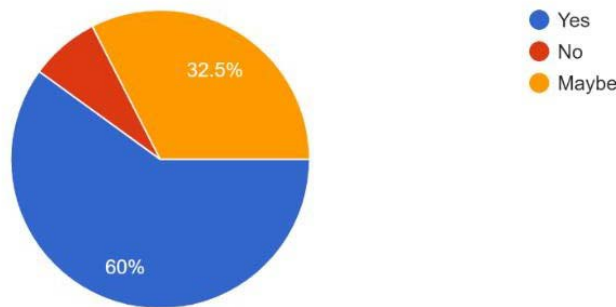


Fig. 5. (Adoption of mirrorless cameras by professional photographers)

Q.6

Further in this survey, the researcher asked about why they think that mirrorless camera system is better than DSLR camera system. Out of all participants who participated in the survey, 29 (72.5%) participants said they think that mirrorless camera is better than DSLR camera because of its lighter camera body and lighter lenses. 24 (60%)

Why do you think that a mirrorless camera system is better than a DSLR camera system?

40 responses

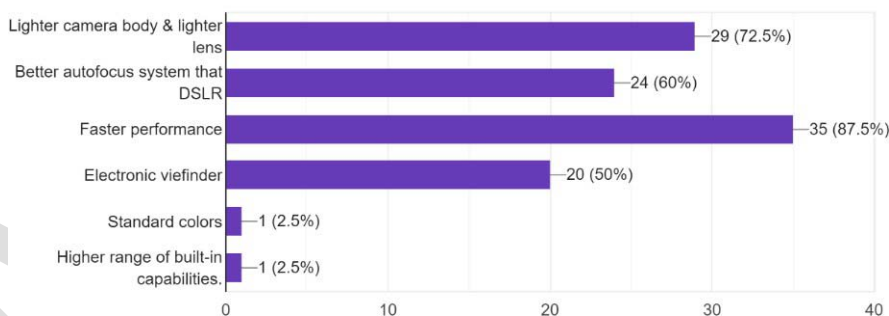


Fig. 6. (Percentage of advantage-based comparison of mirrorless camera and DSLR camera)

participants think that mirrorless has better autofocus system than DSLR camera. 35 (87.5%) participants think that mirrorless camera system has faster performance than DSLR camera system. As mirrorless camera system introduces Electronic Viewfinder (EVFs), 20 (50%) participants said that is why mirrorless camera is better than DSLR camera and 1 (2.5%) participant gave another reason that mirrorless camera system has higher range of build-in capabilities as well as it has standard colours than DSLR camera system.

Q.7

For the last question, the researcher asked participants that what they think about mirrorless cameras being expensive compare to their DSLR counterparts. 26 (65%) participants nodded that being a new technology, mirrorless cameras are expensive compared to DSLR. 10 (25%) participants said that mirrorless cameras are not expensive and 4 (10%) participants said that they are not sure about the pricing of mirrorless camera system.

Do you think that mirrorless cameras are expensive than DSLR cameras?

40 responses

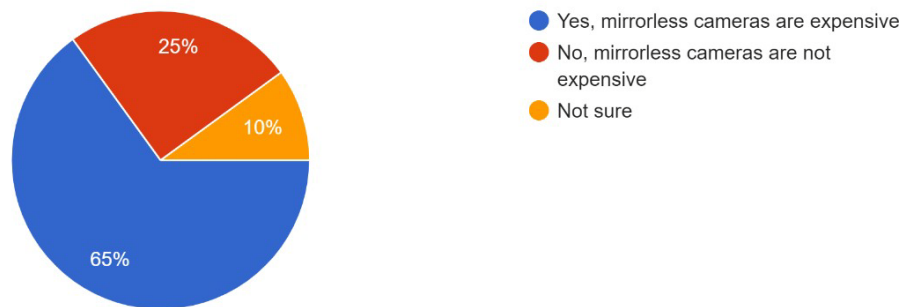


Fig. 7. (Cost-wise comparison between mirrorless and DSLR cameras)

Result:

As to achieve the objectives, the researcher conducted survey regarding comparative study between mirrorless cameras and DSLR cameras. Initially the researcher had two objectives which were

1. To identify the factors affecting the adoption of the mirrorless camera by professionals.
2. To investigate the perspective of professionals towards the mirrorless camera.

To achieve first objective, the researcher asked various questions about advantages and disadvantages of both the camera systems (*i.e., mirrorless and DSLR*). As we can see in *fig. 1* out of 40 participants, 23 participants use DSLR camera for their professional work and 17 participants use mirrorless camera for their professional work. As we can see from *fig. 1*, more than 50% participants use DSLR for their professional work due to some factors such as: battery life, better ergonomics, optical viewfinder, better handling, etc.

As we can see from *fig. 4* when the researcher asked participant about the usefulness of mirrorless cameras in their professional work more than 50% participants were not sure about the usefulness of mirrorless cameras. But in next question, when the researcher asked participants whether they think that mirrorless camera systems is better than DSLR, 60% of total participants nodded that mirrorless camera system is better than DSLR in some aspects (*fig. 5*). As the researcher asked last question about the pricing of mirrorless camera, 65% participants said that mirrorless camera system is still expensive compared to their DSLR counterparts.

Conclusion

Upon analyzing the data collected, the researcher arrives at following conclusions:

- 1) The main factor which is affecting the adoption of mirrorless cameras is its pricing compared to the DSLR. As mirrorless camera system is fairly new in the consumer digital imaging space than DSLR, camera manufacturing companies tend to sell their cameras for higher prices,
- 2) There are large number of professional photographers who are reluctant to use mirrorless camera because of some key factors which are mention below
 - i) Longer Battery life
 - ii) Optical viewfinder
 - iii) Wide selection of camera lenses.
 - iv) Robust body
 - v) Better technical support.

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Source available at

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